Communication of Critical Results for Patients in the Community
National Laboratory Handbook

National Clinical
& Integrated Care Programmes
Person-centred, co-ordinated care

PATHOLOGY

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

Contents

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On behalf of the Communication of Critical Results Working Group.

Date & Review Date

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Scope

The aim of this document is to provide guidance on communication of critical results for patients in the community, whether these laboratory tests originated from community or hospital settings. The procedure outlined is applicable to all laboratory results. The specific concentration of analytes in Appendix 1 is only applicable to adult, non-pregnant patients.

Key recommendations for Clinical Users

- Clinicians are responsible for developing a system whereby test results returned from medical testing laboratories are examined and appropriate action taken in a timely manner.
- It is recognised that occasionally, unexpected critically abnormal results are found on analysis, such that laboratory staff become aware of a potential emergency before the treating clinician. In these circumstances, laboratory staff should follow this guidance to contact the requesting clinician to relay the result.
- Clinicians should have a system in place whereby appropriately trained staff receive results, and communicate same within the timeframe indicated. As most labs operate a normal service at least between 8am and 8pm (and often later), with community tests which arrive late in the day frequently analysed between the time of arrival and midnight, such systems should be operational at all times. Clinicians should update this contact information with their local laboratories in the event of any changes.
- Information provided to the laboratory must be accurate, including patient demographics, contact details and date and time of phlebotomy. Ex vivo changes may cause spurious critical results, and incorrect specimen information may result in action which causes unnecessary stress and inconvenience to patients.

Key recommendations for Laboratories

- Medical testing laboratories require a register of General Practitioners (GPs) and all health care professionals and services who send samples to the laboratory, including details of the appropriate contact number for transmission of critical results, during working hours, and out of hours. (See example Appendix 2.) This registration process may be a standalone process, combined with data sharing agreements required to comply with General Data Protection Regulations (GDPR), or part of a Service Level Agreement (SLA). Many laboratories have a registration process in place. Additionally GPs and other laboratory users should be given the option of supplying their personal mobile phone number or other contact details for emergency use.
- Staff communicating critical results should include a statement of urgency, indicating whether the result requires action within 2 hours, or on a same day basis. Results should be communicated in line with accreditation requirements, and incorporate a read back procedure to ensure correct receipt of all information provided.
- A local policy should be drawn up, clearly delineating the staff responsible for the escalation procedure outlined in this guidance.

Background

The National Clinical Programme for Pathology was requested to prioritise development of guidance for communication of critical laboratory results in the community. Such results most commonly arise from test requests from GPs, however issues may arise when there are unexpected critical results following out-patient attendance, Emergency Department (ED) attendance or when a result becomes available after a patient has been discharged.

It is the responsibility of the healthcare professional who requests a laboratory test to ensure that the result is reviewed and appropriate action taken. However, when a critical result is obtained, laboratory personnel become aware of a potential medical emergency before the requesting clinician is aware of the urgency of the situation. In this setting, an effective system of communication is essential to ensure patient safety.

The objective of this guidance is to clarify:

- A minimal list of critical test results which should be telephoned to the requester.
- A list of critical test results where such communication should include an indication of the need for urgent clinical intervention.
- The process to be following during and outside working hours of the requester.
- Assisting in the care of the patient, with communication of the critical result to the emergency care provider (if different to the requester).

This guidance produced is not intended to replace the clinical judgement of laboratory medicine consultants, who make decisions in relation to clinical liaison as a key part of their role. In addition to critical results which are the focus of this guidance, laboratory medicine consultants will frequently discuss results where additional information is required from the requester to interpret the result and advise, or where the laboratory medicine consultant feels that a discussion may benefit the patient when there is an unusual result or pattern of results.

This guidance is intended to provide clear information for both laboratories and requesters in relation to minimum recommendations for communication of critical laboratory results.

Communication of Critical Results

The purpose of this guidance is to detail recommended practice in communication of critical results for patients in the community. The results where consensus was reached on communication by telephone are listed in Appendix 1. This is a minimum set of results which should be telephoned when the thresholds are exceeded, at least on first finding. Laboratories may choose to communicate milder abnormalities by telephone, and may define protocols in consultation with local clinicians in relation to additional results requiring telephone communication in particular patient subgroups. This protocol was considered on a test by test basis, as the complexity of considering patterns of tests is too complex to detail in an overarching protocol. The minimum set of tests outlined in this document does not replace professional judgement about other results which require telephone communication.

It is essential that samples are properly labelled and the time and date of collection is accurately communicated. Misrepresenting the time of phlebotomy is poor professional practice, and should be reported as a clinical incident. Incorrect reporting of sample time causes difficulty interpreting hyperkalaemia in particular. Conversely, hypokalaemia may be missed when ex vivo leakage of potassium results in an inappropriately normal result.

Classification of Critical Results

Critical results are classified according to the severity of potential underlying diagnoses, imminent risk to the patient and the urgency of intervention.

Category A results require communication within 2 hours. This classification indicates potential immediate danger to the patient, or a potentially life-threatening illness when urgent intervention is required.

Category B results require communication within 24 hours, and preferably on the same working day.

Category C results could have an immediate impact on a patient's management (either treatment or investigation), however action is likely to be taken on the next working day. Telephone communication of these results on the next working day was deemed satisfactory.

Required Steps for Telephone Transmission of all Results, including Critical Results

Telephone communication of results must be performed in compliance with current ISO 15189 standards. Laboratories require a written policy and procedure on the transmission of results.

This procedure should include steps to:

- Identify yourself, and to whom you are speaking,
- Give a clear indication of urgency,
- Identify the patient,
- Give result (including reference range and units),
- Request read back & ensure result received correctly,
- Reiterate urgency and indicate that the call has been logged,
- Document call in laboratory telephone log and/or on the report,
- Transmission of results should be subject to audit and review.

For results classified as **Category A** it should be stated **that this result is likely to require action within 2 hours.**

For results classified as **Category B** it should be stated that **this result has urgent implications for the patient and must be communicated to the patient's doctor or their nominee today**.

For results classified as **Category C** it should be stated that **this result has implications for the patient and should be communicated to the patient's doctor or their nominee today.**

Process for Communication of Critical Results

1. Contact the requesting healthcare professional or their nominee

1.1 Medical testing laboratories require a register of General Practitioners (GPs) and all health care professionals and services who send samples to the laboratory, including details of the appropriate contact number for transmission of critical results, during working hours, and out of hours. (See example Appendix 2.) Registration should require provision of a telephone number to receive critical results, which will be answered 24/7. It is the responsibility of the clinician to update this information in the event of any changes, to ensure that their patients are not put at risk in the event of difficulty communicating a critical result.

1.2 Laboratory users should be made aware of the extended working day operated by most laboratories, and therefore the possibility that critical results may arise during the evening.

1.3 It is the responsibility of the requesting clinician to ensure that their deputising service, or another system is in place to receive results when they themselves are off-duty.

1.4 Clinicians should be offered the opportunity to provide a personal mobile number/email in the event that the primary method of contact is unsuccessful.

1.5 A non-conformance should be raised when a critical results contact number is not answered. New contact details should be requested from the clinician for future patients.

2. For a Category A critical result, if the requesting clinician cannot be contacted, contact the patient

2.1 The patient/carers mobile number should be included with laboratory requests (with patient consent to ensure compliance with GDPR), at least for those requests which may give rise to Category A critical results.

2.2 When there is imminent risk to the patient (Category A result) and the requester or their nominee is not available, the patient should be contacted.

2.3 Hospitals should develop a policy including which member of staff will take ownership of this process. It is recognised that most laboratory scientists have never worked in a patient facing role, and this will be outside their scope of practice. Additionally the laboratory scientist may be dealing with other emergencies requiring immediate scientific input. There are effective policies in place in hospitals where the medical team on call or senior nursing staff are the designated individuals for making contact with the patient.

2.4 Scientific staff should transmit the result causing concern, together with patient's demographics and contact details to the designated contact person.

2.5 The patient should be advised to proceed to the nearest ED, and where possible it should be established where the nearest ED is located. Where there is a risk of cardiac arrhythmia or altered consciousness, the patient should be advised not to drive him/herself.

2.6 Where a patient has timely transport available from a friend or neighbour this is likely to be the fastest and most appropriate way of proceeding to the ED.

2.7 The patient's permission should be sought to send a text or media message indicating the testing laboratory and the test giving rise to concern to a specific mobile number. This can be shown at reception, to indicate referral, and at triage to let ED staff know the cause for concern.

2.8 The designated contact person should confirm to the laboratory scientist that contact has been made, whether the patient is arranging transport to the nearest ED, and the agreed mobile number for communication by text of key information for the ED.

2.9 Hospitals should develop the capability to send text messages to patients, providing emergency information at triage. The message should include the testing laboratory,

telephone number to contact the on call scientist, and the test giving rise to concern. A suggested template text message has been drafted, see Appendix 3.

2.10 When a patient has no means of transport to ED, and the result indicates imminent danger, the result should be referred to the laboratory medicine consultant on call. If considered appropriate the laboratory medicine consultant should contact the National Emergency Operations Centre (NEOC) on 0818 308000 and select option 1. Identify yourself and indicate that this is an emergency laboratory call to the NEOC operator (see procedure in Appendix 4).

2.11 If the patient cannot be contacted, retry contacting the requesting clinician, as it is possible that contact may be established.

3. For a Category A critical result, if the requesting clinician and patient cannot be contacted

3.1 If the patient or requesting clinician cannot be contacted, and the patient is in imminent danger (Category A result) the result should be discussed with the laboratory medicine consultant. When clinically indicated the laboratory medicine consultant should consider contacting Gardaí for assistance, and giving guidance on the level of urgency of treatment.

4. For a Category B result where the requesting clinician cannot be contacted

4.1 Ensure that the result has been released so that the requesting clinician will see it if he/she looks for the result in the normal way.

4.2 Continue to attempt to contact the requesting clinician as frequently as workload permits. All attempts to contact should be recorded.

4.3 If contact has not been made by the end of the working day, consult the laboratory medicine consultant, to assess whether the result merits escalation to the process used for Category A results.

4.4 A non-conformance should be raised when a critical results contact number is not answered. New contact details should be requested from the clinician for future patients.

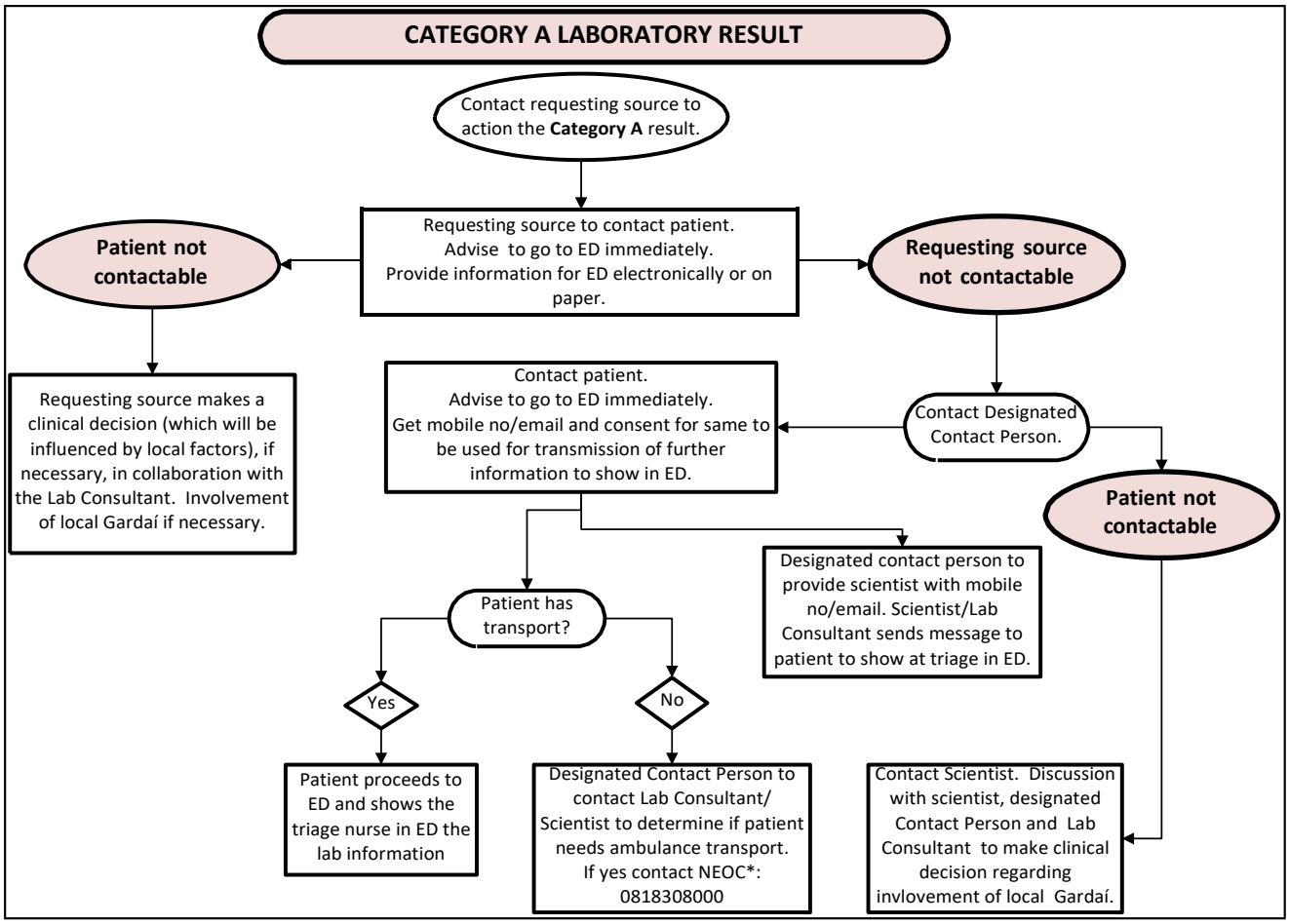
5. For a Category C result where the requesting clinician cannot be contacted

5.1 Ensure that the result has been released so that the requesting clinician will see this if he/she looks for the result in the normal way.

5.2 Continue to attempt to contact the requesting clinician daily for 3 days. All attempts to contact should be recorded. Category C results are phoned to ensure that they are not missed given their impact on patient care.

5.3 Where a requestor has not been contactable over a period of days using the contact details given for critical results, a non-conformance should be raised and investigated. New contact details should be requested from the clinician for future patients.

Communication of Category A Critical Result



Recommendations

1. All clinicians should have a system in place which will allow them, or their nominees be contacted with critical results, both within the working day, and out of hours.
2. Laboratories should have a register of laboratory users with details of clinicians and services who regularly use their laboratories, which must include contact details (telephone number +/- email, monitored 24/7) for transmission of critical results. An optional template Laboratory User Registration form is included for laboratories which have not yet compiled a register (Appendix 2). Clinicians should be given the option of providing personal contact details as an additional safeguard.
3. Local policy should be developed in all hospitals identifying who will take ownership of the steps involved in optimising patient safety when a critical result is found on testing of a sample, when the patient is in the community.
4. An information poster (Appendix 5) should be made available (both electronically and in print form) for patients to communicate what will happen if there is unexpected concern when their blood is analysed.
5. Laboratories should have a system in place where a result can be released electronically, while contacting the clinician by phone. Systems where the result is not released while on a telephone queue may hinder timely communication.
6. Time of phlebotomy must be accurately communicated to the laboratory. Misrepresenting the time of phlebotomy is considered poor professional practice.
7. Nationally agreed critical result limits should be built into MedLIS.

8. A patient advised to return to the ED is considered to be a return patient under Department of Health (DOH) Legislation S.I. No. 548 of 2017. Return patients are not liable for an attendance charge – this is essential to remove financial barriers to urgent care.
9. The effectiveness of Communication of Critical Results should be audited, no later than 1 year after approval of this document. Findings on audit will identify improvements to be incorporated into version 2.

Future Work

Alternative systems for communication of results should be explored. Possible benefits of dedicated email addresses, client relations management software and a notification App as used by some radiology departments all merit further exploration.

It is recommended that an information poster to explain this process should be developed for patients and available in all locations where phlebotomy is performed. (See example Appendix 5.)

A generic laboratory instruction, which can be customised to illustrate local policy and contact numbers would assist laboratories with implementation this guideline. (See example Appendix 6.)

The potential to include critical results contact numbers in the Service Directory under development by the Office of the Chief Information Officer as a potential central repository for contact information should be evaluated.

Recommendations for National Laboratory Information System (MedLIS)

It is recommended that the patient demographics collected should include the mobile phone number of the patient and or their carer/next of kin, to facilitate contacting the patient in the event that a critical result is obtained on analysis of a test, and the test requestor or their nominee cannot be contacted. As recommended above, nationally agreed critical result limits should be built into MedLIS, to assist with implementation.

The possibility of including critical result contact numbers with GP demographics should be explored.

Information for Patients

When you are having tests performed, occasionally unexpected results are obtained. In many cases, particularly when bloods have been transported, this may result from changes which take place when blood is in the tube, rather than truly reflecting disease. However when there is any concern that a result may indicate a condition where prompt treatment is necessary, you may be contacted by healthcare professionals who you have not met. These contacts are in line with national guidance.

When the blood test which is causing concern is repeated, this may show that the changes were due to changes in the tube, or your body may have corrected the abnormality. However the approach which will be adopted by the public medical testing laboratories is a safety first policy.

Guideline Development Methodology and Consultation

A workshop with members of the Communication of Critical Results Working Group (Appendix 7) was held in Dr Steeven's Hospital on November 14th 2018 to discuss and agree the procedure to be followed when communicating critical results.

Prior to the workshop, information available from the MedLIS phase 1 sites about critical results which are phoned as well as Royal College of Pathologist guidelines[1] were compiled in Excel and circulated to the Haematology, Chemical Pathology, Immunology and Microbiology Working Groups of the National Clinical Programme of Pathology for comment. Feedback was incorporated, and the Excel workbook was circulated to workshop participants in advance. Critical results for haematology and chemical pathology tests were finalised at the workshop. Due to time constraints, additional consultation was undertaken post workshop in relation to immunology and microbiology critical results. A draft was circulated to the Working Group on 06/12/2018 with feedback requested by 19/12/2018. Feedback was incorporated into the document and the document was submitted for external consultation.

The draft guidance was then circulated to the following organisations for consultation:

Association of Clinical Biochemists in Ireland,

Faculty of Pathology, RCPI,

Academy of Clinical Science and Laboratory Medicine (ACSLM),

Irish Endocrine Society,

Irish Haematology Society,

Irish Society of Clinical Microbiologists (ISCM),

Health Products Regulatory Authority (HPRA),

Irish National Accreditation Board (INAB),

Irish External Quality Assessment Scheme (IEQAS),

All National Clinical Programmes,

Irish College of General Practitioners (ICGP),

Irish Society for Gastroenterology,

Infectious Diseases Society of Ireland,

Irish Cardiac Society,

Irish Thoracic Society,

College of Anaesthetists,

Office of Nursing Midwifery Service Director (ONMSD),

Royal College of Surgeons in Ireland (RCSI).

A thematic summary of the external consultation is provided in Appendix 8. Following incorporation of feedback from external consultation, the document was submitted for final approval by Clinical Innovation and Design, HSE, for inclusion in the National Laboratory Handbook.

References

1 The communication of critical and unexpected pathology results, Dr Bernie Croal, Aberdeen Royal Infirmary. The Royal College of Pathologists. Fourth Floor, 21 Prescot Street, London, E1 8BB.

Appendix 1. Critical Results requiring Urgent Communication

Critical Alerts Threshold for Chemical Pathology Tests					
Analyte	**Units**	**Action Limits**		**Urgency**	**Comment**
		Low threshold	**High threshold**		
Sodium	mmol/l	≤ 120	≥ 155	A	Results between 150 - 155 require discussion
Potassium	mmol/L	≤ 2.5	≥ 6.0	A	
eGFR	ml/min	≤ 15		A	New presentation
Urea	mmol/L		≥ 30	A	New/significant increase in non-dialysis patient
Creatinine	µmol/L		≥ 354	A	
ALT / AST	U/L		≥ ULN x15	B	
Adjusted Calcium	mmol/L	≤ 1.8	≥ 3.5	A	
			3.0 - 3.5	B	
Phosphate	mmol/L	≤ 0.3		A	
		≤ 0.45		B	
Magnesium	mmol/l	≤ 0.4		A	
Free T4	pmol/L		≥ 50	C	
Amylase	U/L		≥ ULN x 5	A	
Carbamazepine	mg/L		≥ 25	B	
Cortisol	nmol/L	≤ 50		A	Unless a dexamethasone suppression test has been performed
C Reactive Protein	mg/L		≥ 300	A	
Creatine Kinase	U/L		≥ 5000	A	
Triglycerides	mmol/L		≥ 20	B	
Digoxin	ug/L		≥ 2.5	B	
Glucose	mmol/L	≤ 2.5	≥ 25.0	A	
Lithium	mmol/L		≥ 1.5	B	
Phenytoin	mg/L		≥ 25	B	
Vitamin B12	pg/L	≤ 100		B	
Troponin	ng/L		≥ 99 percentile	A	
Hypogamma-globulinaemia	g/L	IgG <3		C	With low IgA and IgM
Paraprotein	g/L	Any IgE/IgD	IgG > 15 IgA >10 IgM >10	C	First time detection

Critical Alerts Threshold for Haematology Tests					
Analyte	**Units**	**Action Limits**		**Urgency**	**Comment**
		Low threshold	**High threshold**		
Haemoglobin	g/L	< 50 (H/M) <70 (N/N)*	≥ 200	B	
White Blood Cell Count	x 10^9/L		≥ 30	B	Morphology follow up
Neutrophil Count	x 10^9/L	≤ 0.5		A	
Platelet Count	x 10^9/L	≤ 30		A	
		31 -50	≥ 600	B	
Blood Film				A	Acute leukaemia, Thrombotic thrombocytopenic purpura (TTP)
INR			≥ 5.0	A	
Haemoglobinopathy screen			Positive	B	
Malaria screen			Positive	A	
Vitamin B12	pg/L	≤ 100		B	

*H/M = Hypochromic/microcytic; N/N = Normochromic/Normocytic

Critical Alerts Threshold for Immunology Tests			
Laboratory test	**Result**	**Urgency**	**Comment**
Glomerular Basement Membrane antibodies	Positive (First time)	A	
MPO or PR3 antibodies	Positive (First time)	B	Only a clearly positive result in the clinical context of likely small vessel vasculitis should be phoned. Decision threshold to be determined locally.
Liver Kidney Microsomal antibodies	Positive (First time)	B	Phone if<16 years
Anti-NMDA antibodies	Positive	B	First detection
New Paraprotein, First time	IgG >15 g/L IgA >10 g/L IgM > 10 g/L IgE & IgD any level	C	
Hypogammaglobulinaemia	IgG <3 g/L with low IgA and IgM	C	

Critical Alerts Threshold for Microbiology Tests			
Laboratory test	**Result**	**Urgency**	**Comment**
Faecal microbiological analysis	VTEC positive	B	
C. difficile	Toxin positive	B	
Mycobacterial microbiological analysis	Positive AFB on ZN stain or positive culture/PCR	C	
Surveillance screen – CPE (rectal/stool)	Positive (first)	C	
Device Culture	Positive from a normally sterile site	C	
Swab / Pus / Fluid aspirate	Any unexpected culture result (unusual pathogen, MDRO*) where patient likely to be on inappropriate empiric therapy	C	
Joint fluid microscopy & culture care set	Positive gram stain or culture	B	
Legionella urinary antigen	Positive	B	
Leptospirosis	IgM positive	C	
Blood Culture	Clinically significant positive result	A / B as per HSE Irish Guideline for the Investigation of Blood Culture Samples	Clinical interpretation of result required to determine significance. Communication in line with HSE 'Irish Guideline for the Investigation of Blood Culture Samples'

*MDRO = multidrug resistant organism

Critical Alerts Threshold for Virology Tests			
Laboratory test	**Result**	**Urgency**	**Comment**
CMV	IgM positive. Low avidity IgG detected	C	Acute primary CMV
Acute Viral Hepatitis	IgM positive	C	
HIV 1 or 2	Positive	C	New detection
HSV	HSV DNA detected	C	Eye Swab
Parvovirus B19	IgM positive	C	Pregnant patient
Measles	IgM positive Oral fluid/urine RNA positive	C	
Rubella	IgM positive Oral fluid RNA positive	C	
Toxoplasma	Positive – primary infection	C	Pregnant patient
Treponema Pallidum	Positive specific serology	C	First detection in pregnant patient
Varicella Zoster	IgG negative	C	Pregnant or immunocompromised patient, exposed to VZV

Appendix 2. Laboratory User Registration Form Template

Laboratory Service User Registration Form	
GP Practice Contact Details	
Practice Name	
Practice Address	
Practice Contact Name	
Practice Phone Number	
Practice E-mail Address	
Out of Hours Mobile Number	
Out of Hours deputising arrangements	
Healthlink Registered E-mail	
GP & Practice Staff Details	
PERSON ONE DETAILS	
Name	
Position	
Professional Registration Number (if applies)	
Mobile Number (optional)	
PERSON TWO DETAILS	
Name	
Position	
Professional Registration Number (if applies)	
Mobile Number (optional)	
PERSON THREE DETAILS	
Name	
Position	
Professional Registration Number (if applies)	
Mobile Number (optional)	
PERSON FOUR DETAILS	
Name	
Position	
Professional Registration Number (if applies)	
Mobile Number (optional)	
Please note that it is the responsibility of the Practice to inform the Laboratory if any of the information contained in this Registration Form requires amendment or update e.g. a change of address or contact details, a GP leaving or joining the Practice. *These changes can be alerted to the Laboratory via e-mail or post to the Laboratory Manager, xxxx* *E-ail Address: xxxxxx* *Postal Address: xxxxxx*	
FORM COMPLETED BY	
DATE COMPLETED	

Appendix 3. Sample Template for Text to Patient with Category A Result

[Patient Name] had a [test name] done in [laboratory name] on [date, time]. This showed [abnormality type*]. Call [scientist name or grade**] at [on call number]. ED attendance is free under SI No 548 of 2017.

*It is recommended to state the type of abnormality for example hypokalaemia, thrombocytopenia etc rather than precise values. The abnormality type should be sufficient to inform triage staff as to the immediate risk (e.g. cardiac arrhythmia, bleeding etc.).

** Ideally give name of the scientist on call. However if about to go off duty, it may be more appropriate to state “Biochemistry on call” etc.

When possible, once the ED where the patient is known, transmission of the result to the triage staff in the ED may facilitate rapid patient management.

Appendix 4. National Emergency Operations Centre - NEOC

When Lab Clinicians require National Ambulance Service Assistance Please put the following into action:

Prior to contacting NEOC-advise Patient/Next of Kin to keep the phone line free as staff from National Ambulance Service will be calling them.

When contacting NEOC.

1. Ring 0818308000 and select option 1
2. Identify yourself with Name & Hospital you're calling from
3. Indicate this is an Emergency Lab Call to the NEOC call taker.

NEOC Emergency Call Taker will then request:

1. Patient Name
2. Contact Number *
3. Location address of the Patient *

**You will be asked to verify both the number and address.*

Please indicate if you have spoken to the Patient or their Next of Kin. If it was the Next of Kin please indicate if the Patient was conscious and breathing.

NEOC Emergency Call Taker will then advise we will be sending the next available resource to the advised location and making contact with the family via the contact number.

Appendix 5. Patient Information Poster

Are you here for a blood test today?

Here's what you need to know

What is a blood test?

A blood test is when a sample of blood is taken for testing in a laboratory. They are one of the most common medical tests. We use them to check your general state of health, how your systems are working or to check for infections.

A blood test usually involves taking a blood sample from a blood vessel in your arm. Often, the sample is taken from the inside of the elbow or somewhere, where the veins are close to the surface.

After the blood sample has been taken, it will be labelled with your name, date of birth, and other details. It will then be sent to a laboratory where medical scientists will perform the tests requested. Results are reviewed by senior staff and consultants.

If you have a blood test, it is important that we have up to date contact details for you. Check with us today.

How will I get my blood result?

All results are sent back to the doctor or healthcare professional who ordered the blood test. Each GP surgery or hospital has its own system in place for giving the patient their blood test results. If all are normal, your doctor will probably let you know this the next time you are here.

Ask your doctor or healthcare professional today how you will get your blood results.

What if my blood test is abnormal?

Your doctor will review your results and may then contact you to discuss the result and agree a plan. Sometimes, our laboratory staff will contact you via telephone and advise you of your results and what to do next. You may also receive a text message with more information.

Check we have your mobile number, or the number of someone who can receive a text message for you.

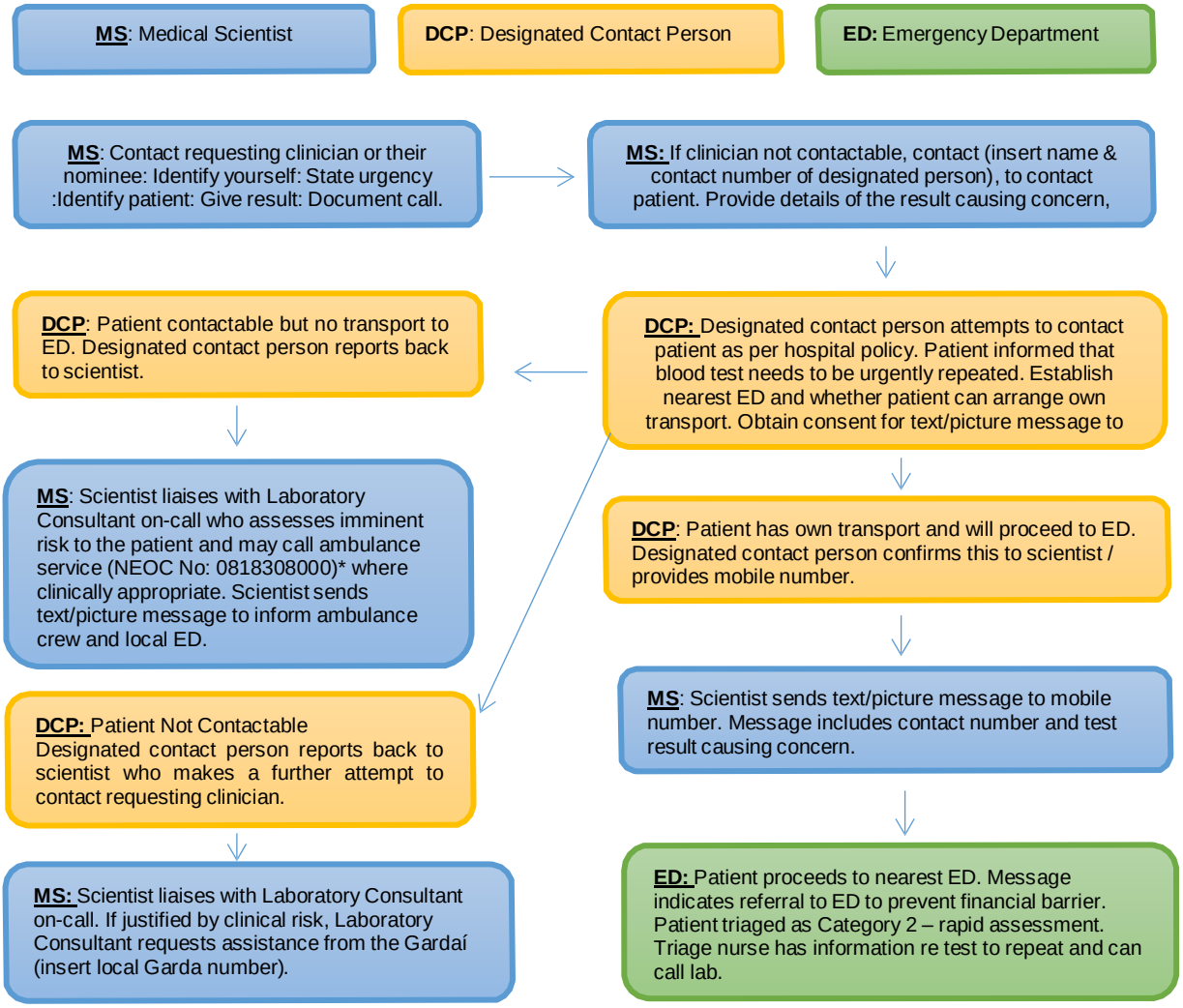
You can read more about blood tests on www.hse.ie or search HSE Blood Tests

Appendix 6. Laboratory Instruction

Category A results indicates potential immediate danger to the patient, or a potentially life-threatening illness when urgent intervention is required. Communicate result within 2 hours stating **that this result is likely to require action within 2 hours.** See process below.

Category B results require communication within 24 hours, and preferably on the same working day. Communicate result within 24 hours stating that **this result has urgent implications for the patient and should be communicated to the patient's doctor or their nominee today**. If requester cannot be contacted by end of working day release result and refer to consultant to access whether the result merits escalation to the process used for Category A results.

Category C results could have an immediate impact on a patient's management. Communicate result on the same or next working day stating that **this result has implications for the patient and should be communicated to the patient's doctor or their nominee today.** If requester cannot be contacted release results and try and make contact for three days.



When Laboratory Clinicians require National Ambulance Service Assistance please put the following into action:

Prior to contacting NEOC-advise patient/next of kin to keep the phone line free as staff from National Ambulance Service will be calling them.

***When contacting NEOC**: Ring 0818308000 and select option 1. Identify yourself with name & hospital you're calling from and indicate this is an emergency laboratory call to the NEOC call taker.

NEOC Emergency Call Taker will then request: Patient's name, contact number and address of the patient. Please indicate if you have spoken to the patient or their next of kin. If it was the next of kin please indicate if the patient was conscious and breathing. NEOC Emergency Call Taker will then advise we will be sending the next available resource to the advised location and making contact with the family via the contact number.

Appendix 7. Members of the Communication of Critical Results Working Group

MEMBERSHIP OF THE NCP-PATHOLOGY COMMUNICATION OF CRITICAL RESULTS WORKING GROUP		
Representing	**Name**	**Department**
Acute Hospitals HSE	Dr Vida Hamilton	National Clinical Advisor and Group Lead
NCP- Pathology	Dr Mary Keogan	Clinical Lead, National Clinical Programme for Pathology
NCP- Pathology	Ms Anne Mannion	Project Manager, National Clinical Programme for Pathology
NCP- Pathology	Ms Joan McCormack	Programme Manager, National Clinical Programme for Pathology
Acute Hospitals HSE	Ms Elaine Brown	Project Manager, Acute Hospitals
Saolta Hospital Group	Prof Margaret Murray	Clinical Director of the Laboratory Directorate at Saolta University Health Care Group
Saolta Hospital Group	Ms Regina Rogan	Laboratory Manager, Mayo University Hospital.
National Acute Medicine Programme	Dr Yvonne Smyth	Clinical Lead, National Acute Medicine Programme
Advanced Nurse Practitioner Group	Ms Karen Carragher	Registered Advanced Nurse Practitioner, Acute Medical Assessment Unit, Our Lady of Lourdes Hospital, Drogheda
Irish Society of Clinical Microbiologists	Dr Anna-Rose Prior	Consultant Microbiologist, Tallaght University Hospital
Ireland East Hospital Group	Mr John Crumlish	Laboratory Manager, Mater Misericordiae University Hospital
Ireland East Hospital Group	Mr Ray O' Hare	Acting Chief Medical Scientist, Our Lady's Hospital, Navan.
Association of Clinical Biochemists in Ireland	Dr Graham Lee	Consultant Clinical Biochemist, Mater Misericordiae University Hospital
South Southwest Hospital Group	Ms Sinead Creagh	Laboratory Manager, Cork University Hospital
Dublin Midlands Hospital Group	Ms Anne Walshe	Laboratory Manager Midland Regional Hospital Tullamore
RCSI Hospital Group	Dr Shari Srinivasan	Consultant Chemical Pathologist, Beaumont Hospital
Chemical Pathology Faculty Sub-group	Dr Rama Srinivasan	Consultant Chemical Pathologist, Tallaght University Hospital
RCSI Hospital Group	Dr Patrick Thornton	Consultant Haematologist, Clinical Director
South Southwest Hospital Group	Dr Maeve Doyle	Consultant Microbiologist, University Hospital Waterford
NCP Emergency Medicine Programme	Dr Navin Ramphul	Consultant in Emergency Medicine, St Vincent's University Hospital
ACSLM	Dr Jacqui Clarke	Chief Medical Scientist, Letterkenny University Hospital.
ACSLM	Dr Irene Regan	Chief Medical Scientist, Our Lady's Children's' Hospital, Crumlin
ACSLM	Mr Richard McCafferty	Chief Medical Scientist, St James's Hospital
ACSLM	Ms Elaine Phelan	Senior Medical Scientist, University Hospital Waterford
Acute Hospitals	Ms Margaret Brennan	Assistant National Director, Quality and Patient Safety
Primary Care HSE	Dr David Hanlon	National Clinical and Group Lead, Primary Care

RCSI Hospital Group	Ms Rozanna Hardie	Directorate Support Manager, Beaumont Hospital
University of Limerick Hospital Group	Mr Kevin O'Connell	Laboratory Manager, University Hospital Limerick
Irish Practice Nurses Association	Ms Elaine Scanlan	Vice Chairperson of IPNA
Patients for Patients Safety	Mr Damien Nee	Patients for Patients Safety Representative
Irish College of General Practitioners	Unable to nominate a representative	
NCHD Lead	Unable to nominate a representative.	

We gratefully acknowledge additional input from:

Dr Cathal O'Donnell, Medical Director, National Ambulance Service.

Mr Sean Brady, National Director, National Emergency Operations Centre.

Prof Des O'Neill, Director of Traffic Medicine, RCPI.

Appendix 8. Stakeholder Consultation and Engagement Summary

The National Clinical Programme for Pathology has endeavoured to ensure that a thorough process of stakeholder consultation and engagement has been conducted to inform the development of the Communication of Critical Results for Patients in the Community guidance document.

The purpose of stakeholder engagement has been to;

- Communicate and inform stakeholders of the organisation of the development of the proposed guidance document.
- Seek feedback on the approach to the process with particular focus on seeking opinion and improvements to the draft.

Communication and engagement on the draft document commenced in November 2018 where a workshop with the members of the Communication of Critical Results Working Group was facilitated by Dr Keogan, Clinical Lead, NCPP.

The formal external consultation period on the draft document was carried out 4th March 2019 – 25th March 2019. The consultation process was hosted through a public link on the Royal College of Physicians of Ireland website and all stakeholders were invited to feedback to joanmccormack@rcpi.ie Programme Manager for the National Clinical Programme for Pathology.

In all, 20 submissions were received via the online platform and/or in writing.

General Practitioners	4
Laboratory Scientists	7
Laboratory Consultants	3
Office of Nursing Midwifery Service Director	2
Clinical Strategy and Programmes Division, HSE	2
Education institution / organisation	1
Community Health Organisations	1

A full list of submissions is available on request. An overview of the main themes emerging from the submissions in response to the consultation process is included below. The National Clinical Programme for Pathology has endeavoured to include feedback where it is deemed appropriate and is appreciative of the time respondents have taken to complete this process.

Theme	**Response**
Service Level Agreements (SLA) and GDPR.	In the consultation draft of the CCR guidance document it was recommended that each lab has a SLA with each GP who uses the laboratory. Following consultation it became clear that any SLA's need to be made with the legal entity which is with the Hospital/ Hospital Group rather than with the lab. As such it has been agreed that each lab develops a process to support a register of GPs that use the laboratory. This register will include a 24/7 phone number required to support this guidance document.

	Provision for GDPR has been considered throughout the document. Patient identification details will only be used for the agreed purpose e.g. to be shared in case of a Category A result. Future work will include the utility of MedLIS to maintain a central GP repository and similar work is on-going with the HSE to provide a Service Directory.
Laboratory Referral Process	**It was identified that there continues to be incorrectly labelled specimens arriving at the lab** - It is essential that samples are properly labelled and the time and date of collection is accurately communicated. Misrepresenting the time of phlebotomy is poor professional practice, and should be reported as a clinical incident. Incorrect reporting of sample time causes difficulty interpreting hyperkalaemia in particular. Conversely, hypokalaemia may be missed when ex vivo leakage of potassium results in an inappropriately normal result.
IT Challenges	**Access to a 'text' system was not available in all laboratories**- Hospitals should develop the capability to send text messages to patients, providing emergency information at triage. The message should include the testing laboratory, telephone number to contact the on call scientist, and the test giving rise to concern. **Ensure correct wording of text message to minimise patient anxiety** - a template text message has been drafted to inform the process (Appendix 8).
Clarification of process	**The processes outlined within the document required some amendments to ensure clarity following consultation.** Flow chart amended and lab instruction template produced. **GP concern regarding provision of personal phone number**- GPs are not obliged to give their personal number (the document suggests that those GPs doing so on a voluntary basis be facilitated). However it is a professional responsibility to have arrangements in place to ensure patient safety.
Lack of GP involvement	**There was concern around the lack of GP involvement in the writing of the document** - The NCAGL* for primary care, a practicing GP was involved. The document has been sent to the QIP** of the ICGP as part of consultation, and the consultation with ICGP was extended to accommodate the QIP meeting schedule.
Commentary on critical cut-off points	**Some comments on critical cut-off points were raised** – some were outside of the scope of the document. Others were brought to the attention of the specific NCPP Working Groups for consideration and amendments made appropriately.

*NCAGL – National Clinical Advisor and Group Lead **QIP – Quality Improvement Programme