

Reference Number: FOIAH2425/380
From: Other
Date: 11 October 2024
Subject: Information provided to patients identified as carrying carbapenemase producing Enterobacterales

Under the Freedom of Information Act, I would like to request information regarding how patients identified with carbapenemase-producing Enterobacterales (CPE) are communicated with. I am requesting some figures and also copies of documents.

Q1 Trust Policy(s) that include the procedure for contacting positive CPE results to patients and healthcare professionals.

A1 [The information requested in Q1 is openly available on the UKHSA website. Please see attached the latest bulletin where Alder Hey data is shown in page 5.](#)

Q2 All versions of patient information materials relating to CPE carriage and/or CPE infection.

A2 [Information not held; the patient leaflets are currently being reviewed in Infection Prevention Committee with a plan to share them with the youth forum.](#)

Q3 In addition, please can you provide the following information. I have provided a table below for ease.

A3

Information Requested	Response
Total number of patients identified with CPE in the period 1/4/2023 to 31/3/24 (financial year 23/24)	21
The total number of patients provided with information relating to CPE in the period 1/4/2023 to 31/3/24 (financial year 23/24)	Information not held – the Trust does not routinely collate or hold this information centrally as part of its management or performance data. In order to confirm if patients had been provided with information relating to CPE, the Trust would be required to access personal data of the individuals and as such the data is exempt under Section 40: Personal data.
Has a patient/public group been involved in developing or reviewing the CPE materials?	Patient information leaflets are currently being reviewed in Infection Prevention Committee with a plan to share them with the youth forum.

Total number of beds in the Trust.	Average Number of Beds Per Day = 231
Total number of hospital admissions in the period 1/4/23 to 31/3/24 (financial year 23/24)	45,291



Surveillance of Carbapenemase-Producing Gram-Negative Bacteria

MONTHLY BULLETIN: August 2024

Date Extracted: 10/09/2024 7:50:43 AM

Introduction

This monthly report describes the trends in the epidemiology of carbapenemase-producing Gram-negative bacteria (CPGNB) in North West England, including North Cumbria. Due to the shift to mandatory reporting of CPGNB in October 2020, this bulletin has been re-developed to report cases based on PCR results rather than susceptibility testing. We report only on Gram Negative bacterial isolates which harbour one of the five main carbapenemases (KPC, OXA-48, NDM, VIM or IMP). For further details, see the data sources, definitions and caveats section below.

Surveillance Highlights:

- In August 2024, there were 214 reports of acquired carbapenemase-producing Gram-negative isolates in North West England, a 20% increase compared to July 2024 (179 isolates) with KPC accounting for 46% of samples, OXA-48 25% of samples, NDM 22% of samples. (Table 1).
- Manchester Royal Infirmary continued to report the most CPGNB isolates (72) a 11% increase from the previous month (65). Isolates were predominantly KPC (31), NDM (26) and OXA48 (13). (Table 1). There were also notable increases in KPC at Macclesfield General Hospital (10).
- The number of NDM isolates reported in North West England increased by 18 from the previous month to (48) with notable increases at Manchester Royal Infirmary (26), Royal Liverpool university Hospital (3), Tameside general Hospital (3). (Table 1; figure 4).
- The number of OXA-48 isolates reported in North West England increased by 15 from the previous month with notable increases at Arrowe Park Hospital (7 isolates), Wythenshawe Hospital (5 isolates), Manchester Children's Hospital (2 isolates), Tameside general Hospital (2 isolates) and Southport Hospital (2 isolates). (Table 1).
- The number of IMP isolates reported in North West England increased by 5 from the previous month to (9) with the notable increases at Whiston Hospital (4 isolates) and Manchester Children's Hospital (2 isolates). (Table 1).

Note:

From October 2023 the Pennine Acute Hospitals NHS Trust will now show as Northern Care Alliance NHS Foundation Trust (Pennine). There are still ongoing reporting issues from Salford so their data is currently not included. In addition, we are still currently in the process of setting up reporting from Warrington and Halton Hospitals NHS Trust and East Lancashire NHS Hospitals Trust following the recent introduction of CPE testing at these trusts. There has also been a new table added to the report (table 2) which is a break down by enzyme and specimen groups across the North West.

Data sources, definitions and caveats:

Data Source

UK Health Security Agency Second Generation Surveillance System (SGSS) database.

SGSS is a passive reporting system that collects and collates antimicrobial susceptibility testing results from all bacterial isolates from human specimens collected by hospital laboratories. Patient demographic information is also included.

From 1 October 2020, all diagnostic laboratories in England have a statutory duty to notify UKHSA of all Gram-negative bacteria with acquired carbapenemases identified in human samples together with the results of any antimicrobial susceptibility testing and any detection of resistance mechanisms, for any of the causative agents listed in Schedule 2 of the Health Protection (Notifications) Regulations 2020 (79). Reporting is via UKHSA's Second Generation Surveillance System (SGSS).

Definitions

Gram negative bacterial isolates with one of the five most common carbapenemases (KPC, OXA-48, NDM, VIM or IMP). Note: laboratories use a range of commercial molecular assays to detect carbapenemases, some of which do not detect IMP.

KPC - *Klebsiella pneumoniae* carbapenemase

OXA-48 - Oxacillinase 48

NDM - New Delhi metallo- β -Lactamase

VIM - Verona Integron-encoded metallo- β -Lactamase

IMP - Imipenemase

Sample definition for Clinical/Screening: the following SGSS sample types/groups are classified as **Screening/Swabs**: 'ANUS', 'FAECES', 'FAECES/LOWER GASTRO-INTESTINAL TRACT', 'ISCHIO-RECTAL', 'PERIANAL', 'RECTUM', 'STOOL', 'WOUND (TRAUMATIC)', 'SWAB - NOS'.

All other SGSS sample types are classified as **Clinical**.

A patient-based definition has been applied, meaning that only the first growth of the same pathogen and carbapenemase-producing mechanism per month is included for each patient, regardless of whether it is a screening or clinical sample; if a patient has two isolates with different organism-enzyme combinations within the same month then both are counted.

Caveats

SGSS data should be interpreted with caution as bias may arise due to the following issues:

Figures for the most recent month may be incomplete due to reporting delays or quarantine/translation issues;

In addition to reporting results on positive isolates from diagnostic samples from patients with illnesses caused by infection with carbapenem-producing gram-negative bacteria, SGSS also includes positive results from the screening of asymptomatic patients, either on admission to hospital or following exposure to infection within hospital. As screening practices vary between Trusts this may also bias the results.

Site is assigned by the requesting organisation (location). Where the Site name is 'Site Unknown', this is where we are unable to assign a site to the requesting organisation or where the sample has been tested at a site/laboratory outside the North West for a patient whose postcode is within the North West boundary.

We welcome your feedback on the content, format and usefulness of this report. Please send any comments and suggestions to: FES.NorthWest@UKHSA.gov.uk

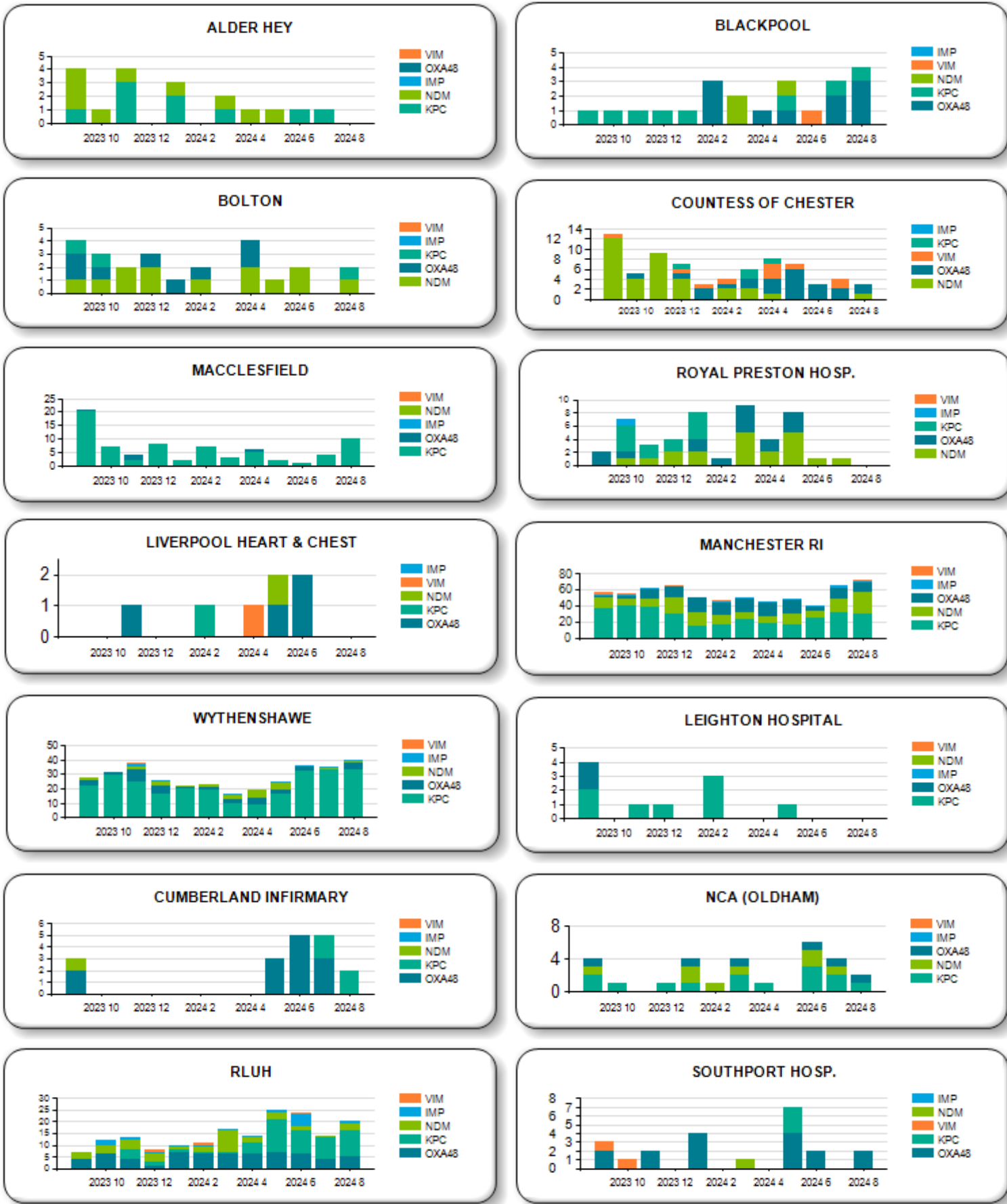
Table 1: Acquired carbapenemase-producing Gram-negative reports by site with common resistance enzymes (for all samples, clinical & screens/Swabs): August 2024

SITE	IMP	KPC	NDM	OXA48	VIM	Total
Aintree University Hospital	0	0	3	4	0	7
Arrowe Park Hospital	0	0	0	7	0	7
Blackpool Victoria Hospital	0	1	0	3	0	4
Broadgreen Hospital	0	1	0	0	0	1
Clatterbridge Hospital	0	0	0	1	0	1
Clifton Hospital	0	0	1	0	0	1
Countess of Chester Hospital	0	0	1	2	0	3
Cumberland Infirmary	0	2	0	0	0	2
Macclesfield Hospital	0	10	0	0	0	10
Manchester Childrens Hospital	2	1	2	2	0	7
Manchester Royal Infirmary	1	31	26	13	1	72
Royal Bolton Hospital	0	1	1	0	0	2
Royal Liverpool Hospital	1	11	3	5	0	20
Royal Oldham Hospital	0	1	0	1	0	2
Site Unknown	0	2	3	1	0	6
Southport Hospital	0	0	0	2	0	2
St Helens Hospital	0	0	0	0	1	1
St Mary's Hospital	0	0	0	1	0	1
Stepping Hill Hospital	0	3	1	0	1	5
Tameside General Hospital	0	0	3	2	0	5
The Walton Centre	0	0	3	3	3	9
Trafford General Hospital	0	1	0	0	0	1
Whiston Hospital	4	0	0	1	0	5
Wythenshawe Hospital	1	33	1	5	0	40
Total	9	98	48	53	6	214

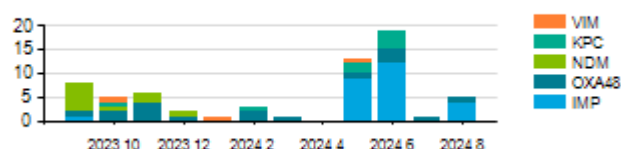
Table 2: Acquired carbapenemase-producing Gram-negative reports from sites in North West by specimen type with common resistance enzymes (for all samples). August 2024

Specimen Type	IMP	KPC	NDM	OXA48	VIM	Total
Blood	0	0	0	1	0	1
Bones & Joints	0	2	0	0	0	2
Brain & Cerebral	0	0	0	0	0	0
Faeces & GI	3	64	34	25	1	127
Fluids	0	0	0	0	0	0
Genital	0	0	0	0	0	0
LRT	0	0	0	0	0	0
Swabs - General	5	25	12	22	5	69
Tips & Lines	0	0	0	0	0	0
Tissues	0	0	0	0	0	0
Urine/Kidney	1	7	2	5	0	15
URT/Mouth/Ear	0	0	0	0	0	0
Wound Swabs	0	0	0	0	0	0
Total	9	98	48	53	6	214

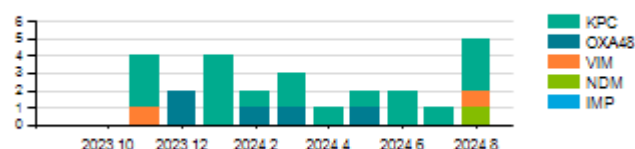
Figure 1: Monthly acquired carbapenemase-producing Gram-negative reports by site and resistance enzyme (for all samples, clinical & screens\swabs).



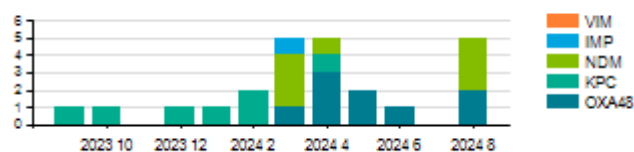
WHISTON HO SPITAL



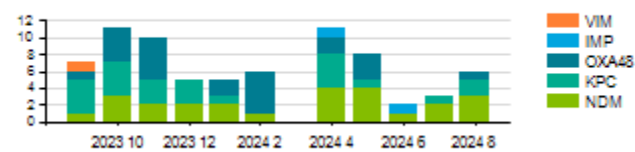
STEPPING HILL



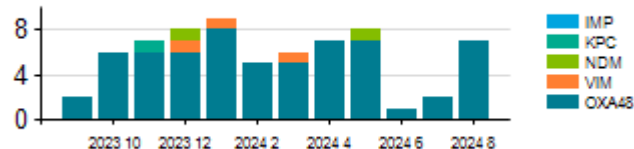
TAMESIDE



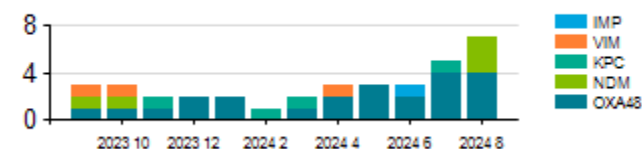
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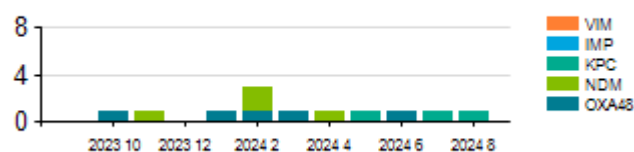
ARROW PARK HOSP.



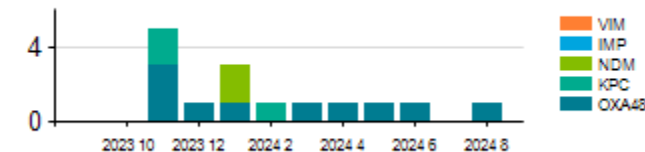
AINTREE



BROADGREEN HOSP.



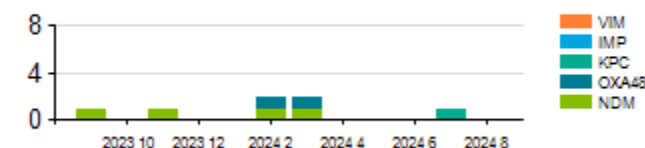
CLATTERBRIDGE HOSP.



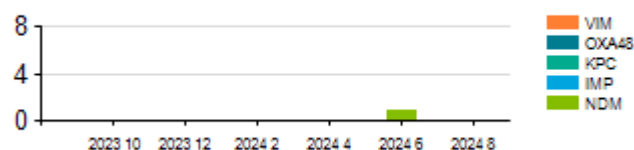
ELLESMERE PORT HOSP.



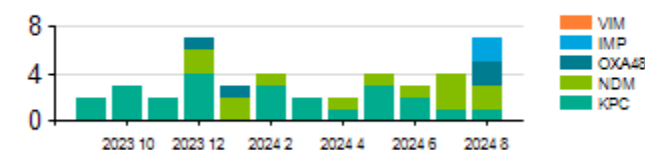
FAIRFIELD GEN HOSP.



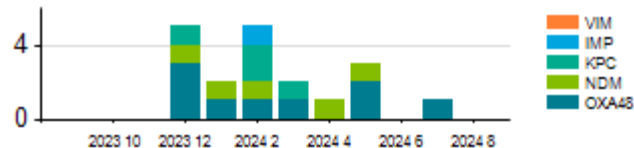
LIVERPOOL WOMEN'S HOSP.



MANCHESTER CHILDREN'S HOSP.



NORTH MANCHESTER GEN HOSP.



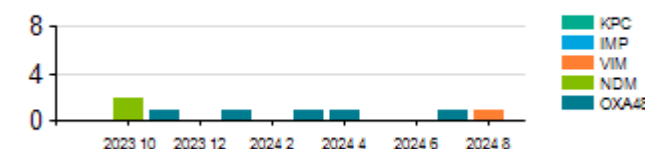
ORMSKIRK HOSPITAL



ROCHDALE INFIRMARY



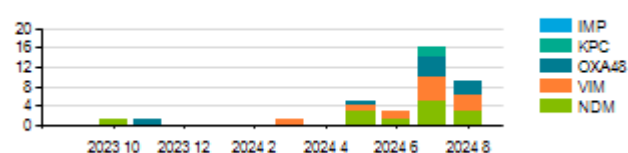
ST HELENS HOSPITAL



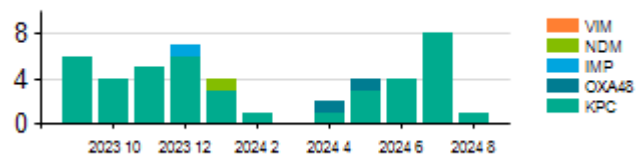
THE CHRISTIE



THE WALTON CENTRE



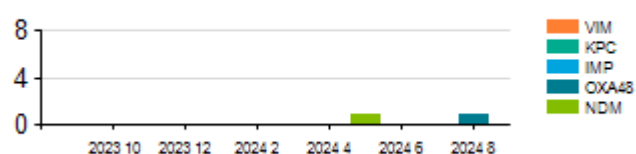
TRAFFORD GENERAL HOSP.



WARRINGTON HOSP.



ST MARY'S HOSP.



HARTLEY HOSP.



CLIFTON HOSP. (LYTHAM)

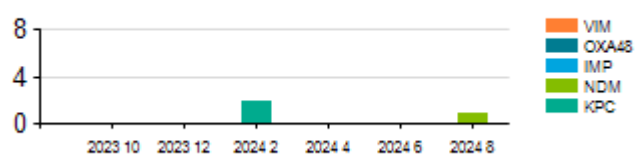


Figure 2: Acquired carbapenemase-producing Gram-negative reports from sites in North West by resistance enzyme (Screening/Swabs & Clinical): Previous 12 months

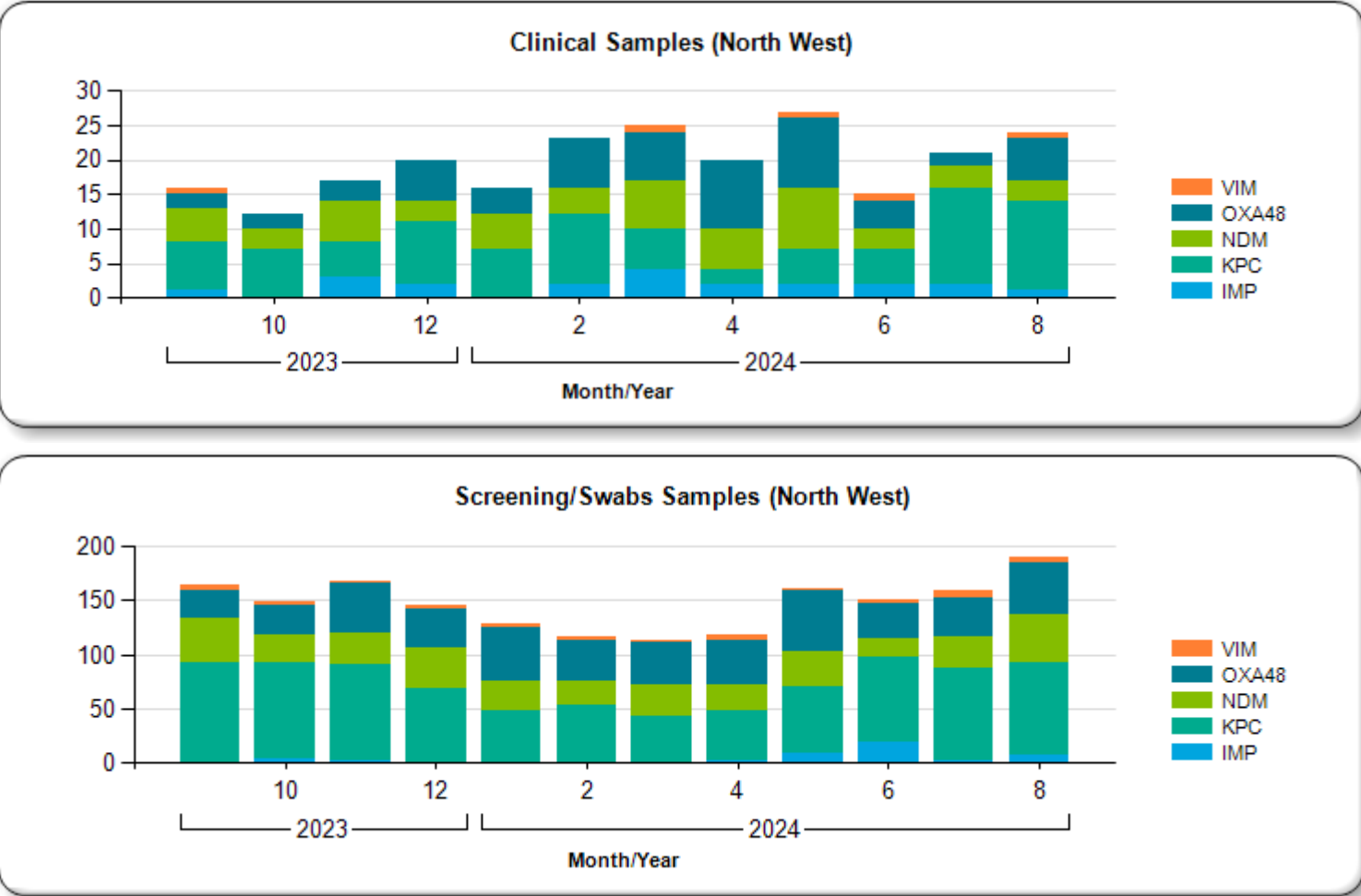


Table 3 Acquired carbapenemase-producing Gram-negative reports by species and carbapenemase family. August 2024

Carbapenemase family	IMP		KPC		NDM		OXA48		VIM		Total
Species	Total	%	Total	%	Total	%	Total	%	Total	%	
Acinetobacter spp	0	0.0%	0	0.0%	6	100.0%	0	0.0%	0	0.0%	6
Citrobacter spp	0	0.0%	3	75.0%	0	0.0%	1	25.0%	0	0.0%	4
Enterobacter spp	4	8.9%	22	48.9%	12	26.7%	4	8.9%	3	6.7%	45
Escherichia Coli	3	3.7%	29	35.8%	17	21.0%	29	35.8%	3	3.7%	81
Klebsiella oxytoca	0	0.0%	1	33.3%	1	33.3%	1	33.3%	0	0.0%	3
Klebsiella pneumoniae	0	0.0%	40	60.6%	12	18.2%	14	21.2%	0	0.0%	66
Other gram negative bacteria	1	20.0%	2	40.0%	0	0.0%	2	40.0%	0	0.0%	5
Other Klebsiella Spp	0	0.0%	1	33.3%	0	0.0%	2	66.7%	0	0.0%	3
Pseudomonas aeruginosa	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1
Serratia spp	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Total	9		98		48		53		6		214

Note: Percentages of row totals shown.

Table 4 Acquired carbapenemase-producing Gram-negative reports by age group and sex per 100,000 population in North West. August 2024

	Female			Male			Total	
Age group	No.	%	Rate	No.	%	Rate	No.	Rate
Under 1	0	0.00%	0	1	1.03%	2.49	7	8.92
1 to 4	4	3.60%	2.4	1	1.03%	0.57	5	1.46
10 to 19	4	3.60%	0.96	2	2.06%	0.46	6	0.70
20 to 29	3	2.70%	0.64	0	0.00%	0	3	0.31
30 to 49	14	12.61%	1.5	11	11.34%	1.21	25	1.36
50 to 74	29	26.13%	2.58	44	45.36%	4.1	73	3.32
over 75	57	51.35%	15.85	38	39.18%	13.97	95	15.04
Total	111	100%	2.98	97	100%	2.66	214	2.90

Rates were calculated using Office for National Statistics' (ONS) Mid-Year Population Estimates (2020) as a denominator. There were 6 results that did not have a stated sex so overall age group totals and rates have been adjusted but not the individual totals and rates.

Figure 3: Acquired carbapenemase-producing Gram-negative reports by organism and resistance enzyme in North West (previous 12 months for all samples clinical and screens\swabs)



Figure 4: Acquired carbapenemase-producing Gram-negative reports by specific resistance enzyme in North West (previous 12 months), for all samples clinical and screens\swabs.

