



COVID-19 in the Mid-West

The response from the Department of Public Health, HSE Mid-West between January and September 2020

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*“And though it doesn’t feel like it now, this pandemic will pass. It won’t last forever.
And one day, hopefully soon, we will be looking back on it, not living through it.*

*So, though we are all struggling with this - and, believe me, we are all struggling –
let’s pull together, let’s keep going, try to keep smiling, keep hoping, and looking out
for each other.*

Be strong, be kind, and let’s continue to act out of love and solidarity.

*I will never be able to thank all of you enough for the sacrifices you’ve made so far
and I’m sorry to have to ask for more. But if we stick with it, and we stick together, I
do know we will get through this.”*

Nicola Sturgeon

In a speech to Scottish Parliament, September 2020

Foreword

The COVID-19 pandemic has been an unprecedented challenge for all including the Department of Public Health, HSE Mid-West. Public health is a vital part of the health service. The staff in my department coped with the COVID-19 pandemic workload in the early months with help of redeployed staff from within and outside the health service. These temporary new staff members provided a life-line to the department and this helped us to be part of the suppression of COVID-19 in those early months of the pandemic. Their support enabled a 9am-9pm seven days a week service for that period. With their help, we provided a Mid-West helpline to answer thousands of calls from concerned members of the public and from healthcare professionals. Most of these staff returned to their substantive posts during the summer months, and I wish to express my gratitude both to them and to their line managers and organisations.

Following a short lull in the incidence of COVID-19, we continue to see a steady stream of cases, most of which are linked to outbreaks. The ongoing pandemic places a strain on our resources but my department has worked tirelessly to contain the spread of COVID-19 in the region. We have battled rising case numbers and with case finding, source identification, contact tracing and outbreak management, we have had a meaningful impact on the health of the population of the Mid-West. For this, I would like to acknowledge and thank the core staff of the department for their hard work and dedication.

My staff have worked tirelessly, with little prospect of relief in the short to medium term. Their dedication and commitment humbles me and fills me with pride in equal

measure. Staffing for our department and across the health service remains a challenge, and winter 2020 will bring additional challenges.

We do not work alone, and I thank my colleagues from across the HSE. Particular gratitude to the members of the Mid-West Executive Forum: Ms. Maria Bridgeman, Chief Officer, Mid-West Community Healthcare, Ms. Colette Cowan, CEO, University of Limerick Hospitals Group (ULHG) and Mr. Ian Brennan, Assistant Chief Ambulance Officer (and Mr. Ronan White, Assistant Chief Ambulance Officer until May 2020). I also thank leadership teams and their staff in Mid-West Community Healthcare, ULHG and the National Ambulance Service. Our Consultant Microbiology colleagues and all the staff in the laboratory in ULHG have assisted time and again in facilitating COVID testing.

We also had tremendous support from local ICT, Mid-West Community Healthcare Communications, Community Medical Service, HSE Maintenance and HSE National Services including HSE Estates, Health Protection Surveillance Centre (HPSC), Office of Chief Clinical Officer, National Public Health, colleagues in other Public Health Departments, Contact Management Programme (CMP) and many others.

In addition, the interagency group i.e. Mid-West Major Emergency Management Steering Group and Mid-West Area Crisis Management Team provided great support. Our colleagues in Primary Care and the National Ambulance Service have assisted us in swabbing on many occasions, and work tirelessly and without complaint to keep up with the increasing workload. Social Inclusion staff have worked hard to reduce risks in our vulnerable populations. I would also like to thank those involved in the COVID-19 Response Support Team and other colleagues that

have and continue to assist us including Occupational Health Services, Limerick City and County Council, Clare County Council, Tipperary County Council, Limerick Institute of Technology, University of Limerick, all General Practitioners in the region and An Garda Síochána. Thanks for political leadership of our TDs, MW Regional Health Forum members and all local councillors across the Mid-West. To all of you and many others too numerous to mention, a heartfelt thanks.

For all living in the Mid-West, it has been a difficult time with many sacrifices for individuals, families, communities and businesses. There have also been many examples of remarkable community spirit. On behalf of our Department, I extend our sincere sympathy to the families of those who have lost their lives to COVID-19.

Thank you to the people of the Mid-West for following the public health guidelines which helped bring COVID-19 under control in the early months of the pandemic. At the time of writing, further COVID-19 restrictions have been implemented nationally to help curb the upward trend in the number of cases. As we prepare for winter 2020, it is important that the people of the Mid-West continue to adhere to public health advice. Everyone in the Mid-West has a part to play in keeping COVID-19 numbers down to reduce illness from this disease. Together we can protect ourselves, our families, friends, neighbours and everyone who lives in the region.

“Ní neart go cur le chéile”

Dr. Mai Mannix, MPH, MRCGP, FFPHMI
Director of Public Health, HSE Mid-West



1. Introduction and aim of report

Public health in the Mid-West

The role of the Department of Public Health, HSE Mid-West is to protect and improve the health of those in Clare, Limerick and North Tipperary, by preventing and reducing the burden of disease. To fulfil our day to day local and national functions and responsibilities, the department ordinarily operates under four core pillars of public health. The four pillars are health protection, health improvement, health services improvement and health intelligence.

COVID-19

The current COVID-19 pandemic is an unprecedented public health challenge at a global, national and regional level. The pandemic has had an impact on all sectors of society. Regional public health departments have played a vital role in managing and containing COVID-19 along with providing public health leadership during this challenging and rapidly evolving pandemic.

To tackle COVID-19 in the Mid-West region, a timely and coordinated response was required. The department made significant changes to ways of working. This involved focusing our health protection responsibilities, designing new work streams and securing redeployed staff to build capacity within the department. The experience and expertise of our staff was valuable when contributing to local and national groups. The **aim** of this report is to outline the role and response of the Department of Public Health, HSE Mid-West in managing and containing COVID-19 within the Mid-West region to date.

2. Outline of report

There are five further chapters in this report. COVID-19 data for the region are presented over two separate chapters.

Chapter [three](#) provides some background information on COVID-19, the types of national and regional services developed to tackle COVID-19 and the role of public health in managing and preventing the spread of the disease

Chapter [four](#) presents the key trends and demographic characteristics of confirmed COVID-19 cases notified to the Department of Public Health, HSE Mid-West between **04 March 2020 and 01 August 2020**

Chapter [five](#) provides a short overview of more recent confirmed COVID-19 cases notified to the Department of Public Health, HSE Mid-West between **02 August 2020 and 19 September 2020**

Chapter [six](#) summarises key challenges, lessons learned and development needs for the department highlighted by the ongoing COVID-19 pandemic

Chapter [seven](#) provides a succinct summary of the report

3. Background

3.1 WHAT IS COVID-19?

COVID-19 is caused by a coronavirus. The virus causes respiratory infection. The virus was first identified in Wuhan in China in late 2019 and had not previously been seen in humans. The virus is mainly spread through person to person contact by direct contact with respiratory droplets from an infected person. The virus causes a mild to moderate infection in most cases. However, the infection can be severe, resulting in hospitalisation or death¹.

The World Health Organization (WHO) declared a global pandemic on 11 March 2020. As of 29 September 2020, there had been over 33.4 million cases globally and approximately one million deaths². The first confirmed case of COVID-19 in the Republic of Ireland was reported on 29 February 2020. The first confirmed case of COVID-19 in Mid-West region was reported on 04 March 2020.

As COVID-19 is a new disease, very little was known about the disease at the beginning of the pandemic. However, there is an increasing body of research which is enhancing our knowledge of the disease. Similar to other diseases, social circumstances including living conditions and poverty seem to be linked with an increased risk of disease^{1,3}. Furthermore, a number of factors including age and

¹ COVID-19 (Novel Coronavirus). Health Protection Surveillance Centre (HPSC). Available from: <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/>

² COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University. [Cited 29/09/2020]. Available from: <https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>

³ Walsh B et al. (2020) Differences in risk of severe outcomes from covid-19 across occupations in Ireland, ESRI survey and statistical report series number 93

having an underlying health condition are associated with increased susceptibility to severe illness¹.

3.2 COVID-19 IS A NOTIFIABLE INFECTIOUS DISEASE IN IRELAND

In February 2020, COVID-19 was added to the list of notifiable infectious diseases in Ireland¹. This means that there is a statutory obligation on all medical practitioners including clinical directors of laboratories to notify their local Department of Public Health of COVID-19 cases.

Information provided to Departments of Public Health on infectious diseases is used:

- To investigate cases
- To identify and manage outbreaks
- To help prevent further cases and the spread of infection. This includes contact tracing and removing conditions favourable to the spread of disease
- To monitor trends and the burden of diseases over time
- To provide evidence for public health interventions including interventions to interrupt the transmission of disease and prevent onward spread of disease
- To help develop communications, messages and actions for prevention⁴

Section 3.4 outlines further detail on our department's role in managing and containing COVID-19 in the region between January and September 2020.

⁴ Working Together for Better Public Health Outcomes in the Mid-West. Report of the Director of Public Health 2018. Available from: <http://hdl.handle.net/10147/624042>

3.3 CURRENT DEFINITIONS AND GUIDANCE

Current definitions and guidelines on COVID-19 in Ireland can be found on the Health Protection Surveillance Centre (HPSC) website⁵. This includes case definitions, setting specific guidance for healthcare and non-healthcare settings, and travel advice. The Health Service Executive (HSE) website also contains information and resources on COVID-19⁶. This includes information on symptoms, protecting yourself and others, testing, high risk groups and services. There are also sections on contact tracing on the HPSC and HSE websites.

The HPSC website contains some useful definitions that highlight the difference between restricted movements and self-isolation. Restricted movement or self-quarantine “means avoiding contact with other people and social situations as much as possible” whereas “self-isolation means staying at home and completely avoiding contact with other people”. This includes other people within your household⁵.

Restricted movements are required for all persons returning from travel to non-green-list countries, for all persons identified as close contacts of a confirmed case and for those with a suspect case within their household. The usual period of restricted movement is 14 days, representing the incubation period of COVID-19. This applies regardless of whether the close contact or travel returnee has a negative COVID-19 test during the 14 day period⁵.

Self-isolation is required for all cases of COVID-19 for a period of 10 days, the period of transmissibility of COVID-19 infection. It is also required for all suspect

⁵ <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/> [Date accessed 01/09/2020]

⁶ <https://www2.hse.ie/coronavirus/> [Date accessed 01/09/2020]

cases awaiting testing and a test result. For suspect cases who test negative, unless clinical suspicion continues, they may stop isolating on receipt of the negative test result, and their close contacts may stop restricting their movements⁵.

3.4 SERVICES DEVELOPED NATIONALLY AND IN THE MID-WEST TO TACKLE COVID-19

This section outlines national and regional services and responses that have been developed in recent months.

3.4.1 National response and services

National guidelines for COVID-19 were rapidly developed and were informed by the WHO and European Centre for Disease Control (ECDC). These national guidelines have evolved in recent months, with ongoing review and revision as necessary in line with emerging evidence⁵.

The National Public Health Emergency Team (NPHE) for COVID-19 was established on 27/01/2020 within the Department of Health. NPHE's role is to coordinate the health sector response to significant public health emergencies and to advise the Government on public health matters. A national cross-Government COVID-19 response plan was developed to plan for and address COVID-19⁷. A number of subgroups were established as part of the COVID-19 national response. This includes a public health subgroup, an acute hospital preparedness subgroup, a

⁷ Government of Ireland. (2020) Ireland's National Action Plan in response to COVID-19 (Coronavirus) Updated 16th March 2020.

vulnerable people subgroup, a guidance and evidence synthesis subgroup, an expert advisory group (EAG), and an Irish epidemiological modelling advisory subgroup.

Within the HSE, the National Public Health Outbreak Response Team (NPHORT) was established to enable a coordinated response across all public health regions. The group highlighted regional issues which were discussed and resolved by senior management at a national level. The group was subsequently replaced by the Pandemic Incidence Control Team (PICT) and the COVID Public Health Operational Group (CPHOG).

To address resource constraints within regional public health departments, several national COVID-19 contact tracing centres were established. These centres assist with the management and contact tracing of non-complex cases.

To ensure consistency and to allow for a national approach, a national case management system, called the Contact Management Programme (CMP) was developed. This can also be referred to as the COVID Tracker System. This is a secure web-based platform that allows for recording of notes on cases and their contacts as well as other case management details.

A COVID-19 tracker app was developed for mobile phone platforms. The app monitors the health of users, provides information on COVID-19 in Ireland and helps identify people who were in contact with a confirmed case for a particular period of time (through Bluetooth).

The HPSC produce regular epidemiological reports based on data from the regional public health departments. These data are collected through the Computerised Infectious Disease Reporting (CIDR) system. These reports provide information to the general public as well as to NPHET and to its subgroups to determine appropriate policy interventions.

3.4.2 Regional services in the Mid-West

The Mid-West Area Crisis Management Team has been the central coordinating centre for a number of regional services developed. Regional services include:

- **Contact tracing:** The Department of Public Health, HSE Mid-West carries out contact tracing for COVID-19 cases, mainly complex cases. A local case/outbreak management system (OMS) was developed to assist with contact tracing and identifying outbreaks. This was in collaboration with IT staff from the Mid-West Community Healthcare. Separate contact tracing is carried out for healthcare workers.
- **Testing/swabbing:** Mid-West Community Healthcare and the National Ambulance Service (NAS) developed a 7-day community testing service. This commenced in March. Services provided include (1) community test centres, (2) mass testing in residential settings including private nursing homes, (3) serial testing in HSE and private nursing homes and (4) public health testing. The NAS plays an ongoing key role in swabbing. Extra capacity was created in the local laboratory in ULHG to assist with the timely turnaround of COVID-19 results.
- **COVID-19 Response Support Team:** The 7-day COVID-19 Response Support Team was set up to support the prevention, identification and management of outbreaks across residential services in the Mid-West. This includes private nursing homes.

- **Community assessment hubs:** Three community assessment hubs were opened to assess positive COVID-19 patients who began to deteriorate at home. There were approximately 230 patients seen by the end of June 2020. The three hubs are now closed.
- **Additional bed capacity:** Due to social distancing measures, the number of available beds in University of Limerick Hospitals Group (ULHG) has been reduced. Consequently, additional step down beds have been identified in nine community nursing units. An intermediate care facility was also established and opened in University of Limerick (UL). Furthermore, additional mortuary capacity was made available at the beginning of the pandemic but it was thankfully not needed.
- **Isolation facilities:** Isolation facilities were provided between mid-March and June 2020. They were provided directly by the HSE in partnership with other stakeholders including Local Authorities, and the Department of Justice and Equality.
- **Personal Protective Equipment (PPE):** PPE has been supplied to a large number of facilities across the region including private nursing homes, mental health facilities, disability residential facilities, primary care facilities, home care services and COVID-19 specific services (community testing centres etc.). PPE was also provided for cases and contacts who were unable to adequately isolate at home but were able to care for themselves.
- **Transport:** In some circumstances, transport was provided for patients and staff.
- **Psychosocial support:** A helpline was set up, daily online support for staff was available and training was provided to managers⁸.

⁸ Presentation by Maria Bridgeman, Chief Officer Mid-West Community Healthcare July 2020

3.5 THE ROLE OF PUBLIC HEALTH IN MANAGING AND PREVENTING COVID-19

3.5.1 The Department of Public Health, HSE Mid-West response and current work streams

Significant changes have been made to the department's staffing structure and workflow processes since January 2020. This included providing a 7-day service with extended opening hours to help manage and contain COVID-19.

Approximately half the work of the department is normally devoted to health protection. However, during the early months of the COVID-19 pandemic, the entire staff in the department worked primarily on COVID-19. The current core workforce of the department is approximately 20 whole time equivalents (WTEs). At the height of the pandemic, this increased to 60 WTEs (redeployed, rehired retirees, agency staff and public administration system staff).

Along with the business as usual and administration/operations work streams, the current COVID-19 work streams within the department are:

- **Case and outbreak management through the health protection team:** The department set up teams to deal with outbreaks in different specialised areas including nursing homes, vulnerable populations, disability and mental health settings. The objective of the teams was to manage and advise on cases and outbreaks within that specialised area. Strategic leadership was provided by the Specialists in Public Health Medicine (SPHMs) and the frontline clinical work was led by the Senior Medical Officers (SMOs) with support from nursing staff and Allied Health Professionals (AHPs). The surveillance team managed the notification and timely reporting of cases to the clinical led teams.

- **Test results, data validation and COVID-19 Tracker entry:** Laboratory confirmed cases are automatically uploaded to CIDR from the local laboratory and from the National Virus Reference Laboratory (NVRL). Manual entry of positive cases from other laboratories is required. This has involved receipt of daily line listings which need to be analysed by surveillance staff and then notified to clinical staff. All positive results are screened and uploaded to the local shared database (OMS). Clinical oversight of these notifications is provided by public health doctors. All confirmed cases are uploaded to the CMP by the local laboratory and NVRL. Enhanced data is entered on to the CMP by contact tracers either within the department or nationally during contact tracing. Cases are followed up by the Department of Public Health, HSE Mid-West contact tracing team to ensure that all contacts have been identified and to establish links between cases. This requires considerable resource but it is an important exercise that usually identifies additional contacts not previously identified.
- **Surveillance data entry on CIDR:** The Director of Public Health is responsible for maintaining accurate surveillance data on all results uploaded daily to the CIDR system. Enhanced data for each case is extracted from the CMP and surveillance staff manually enter these data into CIDR. The department is currently part of a pilot project with the HPSC which involves the robotic transfer of data from CMP to CIDR. This will reduce the administration burden of data entry going forward.
- **COVID-19 specialised cases and complex contact tracing:** Specialised COVID-19 cases are cases which occur in complex settings e.g. nursing homes, healthcare or childcare settings, prisons or detention settings and in vulnerable populations such as Irish Travellers or asylum seekers. The Complex Contact Tracing Team (CCTT) are responsible for contacting and managing specialised COVID-19 cases and complex contacts and ensuring

full resolution of these clinical cases on the COVID tracker. This task is currently completed by agency nurses and some redeployed staff (other redeployed staff assisted with this before their return to their substantive posts). Public health doctors support the CCTT team and deal with queries that arise.

- **COVID-19 congregated settings results notification management:** Due to mass testing in nursing homes, this work stream was a high priority in April and May. This process included expediting the results, collating and batching by congregated setting, confirming and relaying both positive and negative results for residents and staff. This function was supported by redeployed staff, all of whom have now returned to their substantive posts.
- **COVID-19 data reconciliation:** Data from multiple sources including from local and reference labs, CIDR, OMS and the COVID-19 tracker system are reconciled and validated to ensure that all results are communicated and managed appropriately. This work stream is undertaken by the surveillance and research teams.

Appendix 1 includes a process flowchart which summarises this work.

3.5.2 Who we have worked with and supported

The Department of Public Health, HSE Mid-West has worked with a large number of national and local stakeholders in recent months. The department is part of the Mid-West Area Crisis Management Team and fed into some of its subgroups. The department worked closely with ULHG, Mid-West Community Healthcare and the three Local Authorities in the region. Furthermore, the department also contributed

to local planning and the integrated care plan for the region in recent weeks. This includes winter planning for 2020/2021.

Nationally, the Director of Public Health in the department led the National meat processing Outbreak Control Team (NOCT) until July 2020. To tackle COVID-19 in vulnerable groups, the department has worked with the Department of Justice and Equality, and Social Inclusion in Mid-West Community Healthcare. This includes the Traveller health unit, addiction services, homeless services and asylum seeker/refugee services. The department also has worked closely with Mid-West Community Healthcare Primary Care Services, disability and mental health services, as well as private nursing homes.

Administrative and nursing staff dealt with a large volume of phone calls from the public and other stakeholders. This has included nursing staff providing test results. The department provided a range of local businesses, schools, third level institutions and other facilities with advice in recent months. The department also dealt with a large number of press queries and were supported by the local Mid-West Community Healthcare communications department to do this.

The surveillance team worked closely with a large number of groups including the HPSC, NVRL, staff in the local laboratories and the CMP. Researchers engaged with the local hospitals group and Mid-West Community Healthcare to obtain and explore data. Hospital data were used to explore patterns in hospital activity and predict expected activity on a week by week basis.

4. COVID-19 in the Mid-West up to midnight 01/08/2020

4.1 OVERVIEW OF DATA

The Mid-West region comprises of Limerick, Clare and North Tipperary.

Approximately 8% of the total national population reside in the Mid-West region. In 2016, the population of the Mid-West was 384,998. Limerick had the largest population (n=194,899) in the region, followed by Clare (n=118,817) and North Tipperary (n=71,282)³.

All data in the report are provisional and are subject to change due to ongoing review, validation and update. The data used in this chapter were extracted from CIDR on 01 October 2020 at 09:38am. CIDR is the national disease reporting system in Ireland. This chapter (**chapter 4**) focuses on lab confirmed cases of COVID-19 with a CIDR event creation date up to midnight 01 August 2020.

Chapter 5 presents more recent data from 02 August 2020 to 19 September 2020.

Cells less than five are not presented due to small numbers.

4.2 KEY FINDINGS

4.2.1 Number of cases

There were 1,443 cases of COVID-19 notified to the Department of Public Health, HSE Mid-West up to and including midnight 01 August 2020. Table one describes the case categorization of cases notified to the department. The majority of cases (n=1,428, 99.0%) in the Mid-West were lab confirmed cases.

Table 1: Number of COVID-19 cases notified to the Department of Public Health, HSE Mid-West up to midnight 01/08/2020

	Number	Percent
Confirmed cases	1,428	99.0
Probable or possible cases	15	1.0
Total	1,443	100

4.2.2 Characteristics of confirmed cases

Table two provides summary characteristics of confirmed cases in the Mid-West compared to nationally. The Mid-West data in Table 2 are up to midnight 01/08/2020 and national data are up to midnight 02/08/2020. Comparable national data were not published on 01/08/2020. At the beginning of August, 5.4% of all confirmed cases of COVID-19 nationally were in the Mid-West region. Of the confirmed cases in the Mid-West, 609 cases were in Limerick, 392 were in Clare and 427 were in North Tipperary.

Overall, 273 (19.1%) confirmed cases in the Mid-West were hospitalised compared to 3,358 (12.8%) cases nationally. Of these hospitalised cases in the Mid-West, 6.6% (n=18) were admitted to the intensive care unit (ICU) compared to 13.0% (n=437) of cases nationally. Of the 1,506 reported deaths in confirmed cases nationally, 80 deaths were in the Mid-West region (Table 2).

In the Mid-West, 368 confirmed cases were in healthcare workers (HCWs) compared to 8,438 cases nationally. Confirmed cases in HCWs equated to 25.8% of all confirmed cases in the Mid-West compared to 32.2% of all cases nationally (Table 2).

Table 2: Summary characteristics of confirmed COVID-19 cases by county in the Mid-West and nationally up to midnight 01/08/2020

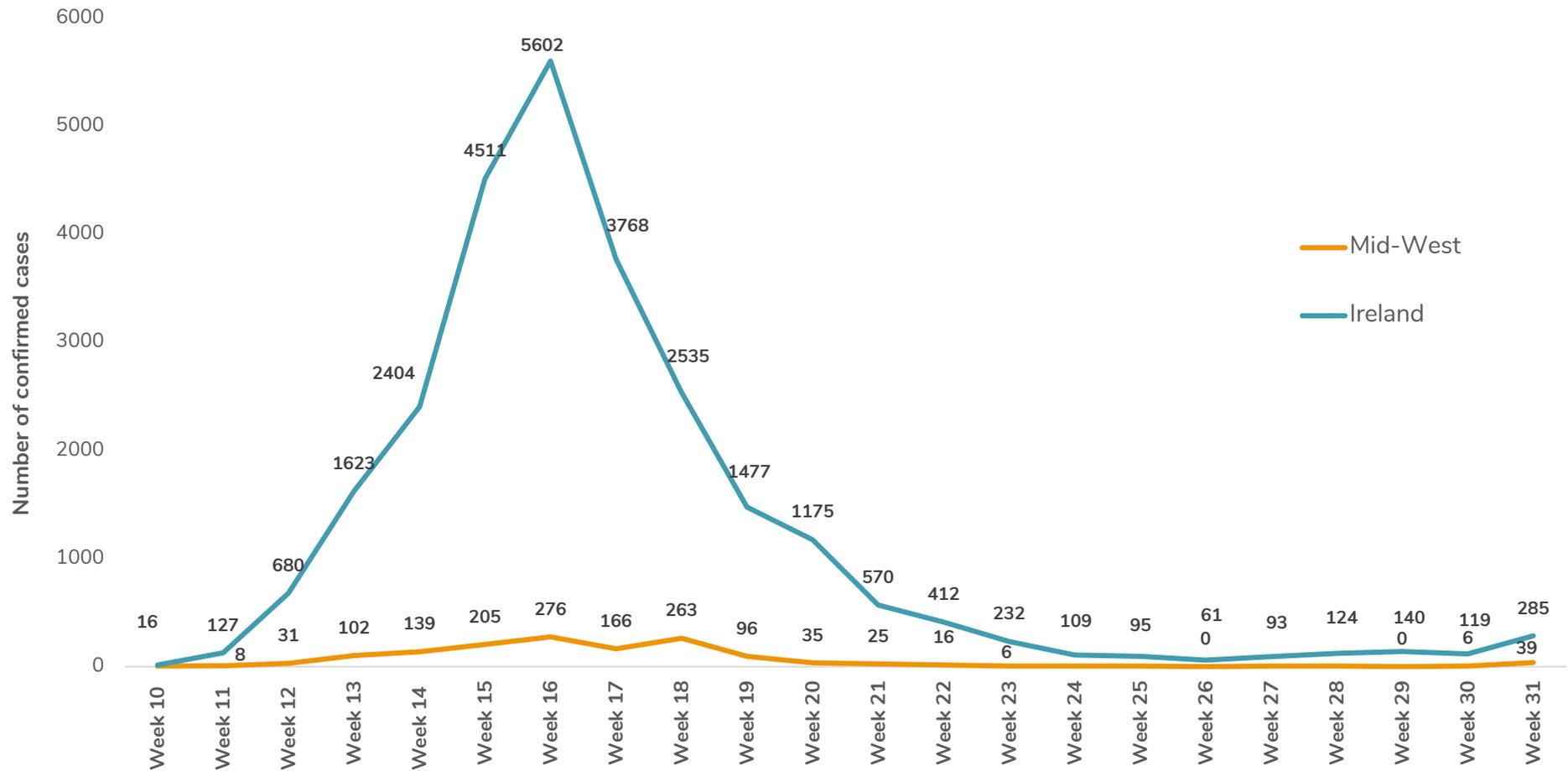
	Limerick	Clare	North Tipperary	Mid- West	Ireland*	% of National Total**
N confirmed cases	609	392	427	1,428	26,209	5.4%
Cumulative incidence per 100,000 population	312.5	329.9	599.0	370.9	550.4	-
N cases hospitalised	128	82	63	273	3,358	8.1%
N cases admitted to ICU	-	-	-	18	437	4.1%
N deaths in confirmed cases	-	-	-	80	1506	5.3%
Case fatality ratio (%)	-	-	-	5.6	5.8	-
N cases in healthcare workers	203	93	72	368	8,438	4.4%

* National data extracted from the "Epidemiology of COVID-19 in Ireland Report" prepared by HPSC on 04/08/2020 for National Public Health Emergency Team (**Data up to Midnight 02/08/2020**)

**% of National Total in the Mid-West

Figure one presents the number of confirmed COVID-19 cases in the Mid-West and nationally per week. There was a peak in the number of confirmed cases at week 16 (week ending 18/04/2020) in the Mid-West and nationally. Figure two presents the daily number and cumulative number of confirmed COVID-19 cases notified in the Mid-West up to midnight 01 August 2020 by epidemiological date. The epidemiological date represents the earliest of onset date, date of diagnosis, laboratory specimen collection date, laboratory received date or event creation/notification date. Peaks in daily numbers in April were associated with large outbreaks.

Figure 1: Number of confirmed COVID-19 cases in the Mid-West and nationally per week up to midnight 01/08/2020



*The data are from CIDR (COVID-19 National Epi Summary of Events - core dataset short version) v1.0 and are up to 01/08/2020, **Each week ends at midnight on Saturday
 ***The number of cases for weeks 10, 24, 25, 27 and 28 in the Mid-West were less than 5 and are not presented

Figure 2: Daily and cumulative number of confirmed COVID-19 cases notified in the Mid-West up to midnight 01/08/2020, by epidemiological date

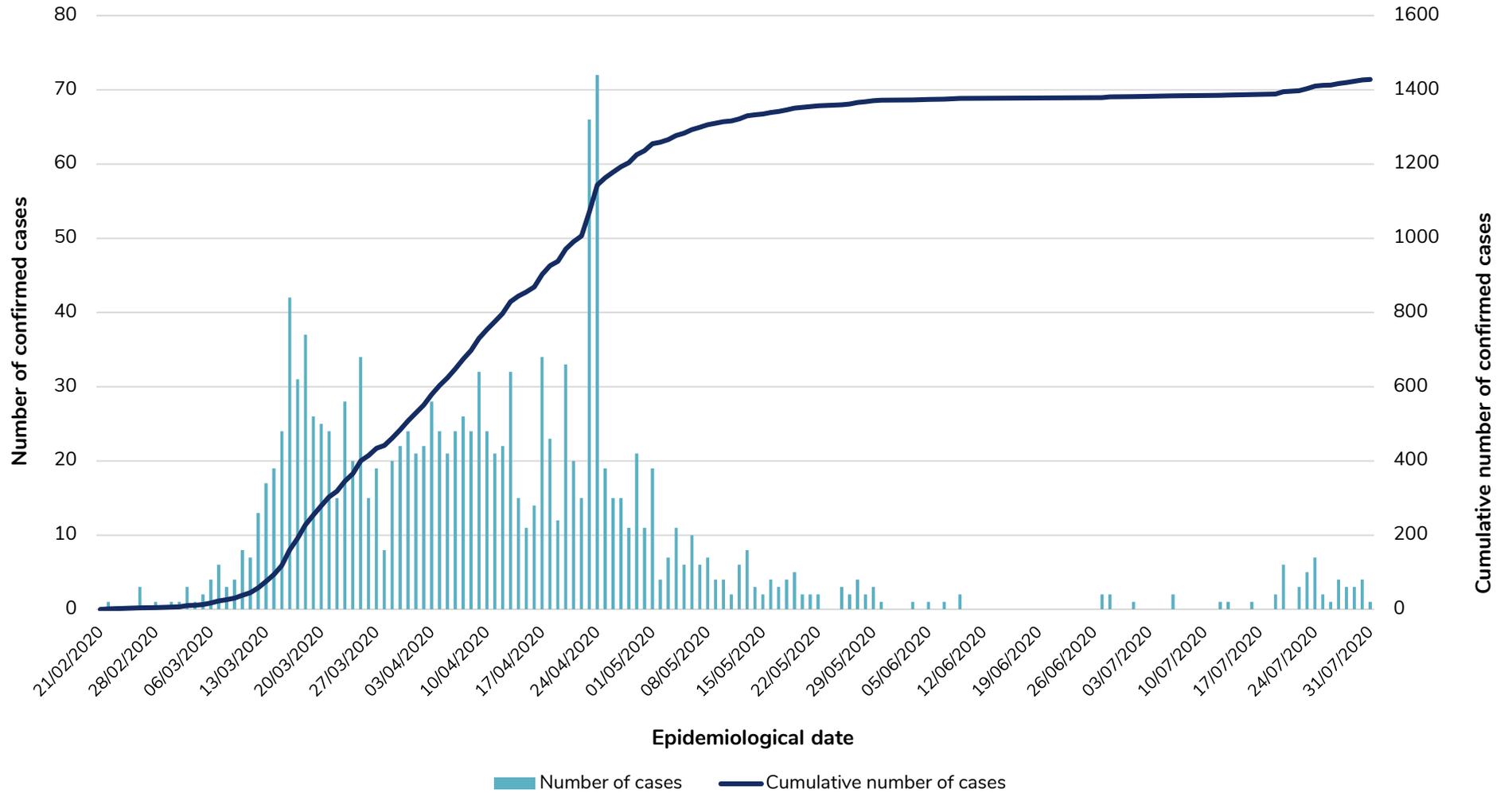


Figure three presents the age and sex profile of confirmed COVID-19 cases in the Mid-West up to midnight 01 August 2020. A higher proportion of cases were females (n=776, 54.3%) than males (n=652, 45.7%). The age range of cases ranged from 0 years to 104 years. The median age of confirmed cases was 49.4 years. Nearly two-thirds (63.0%) of cases were aged 25-64 years while 25.6% of cases were aged 65 years and older.

Figure 3: Age and sex profile of confirmed COVID-19 cases in the Mid-West up to midnight 01/08/2020

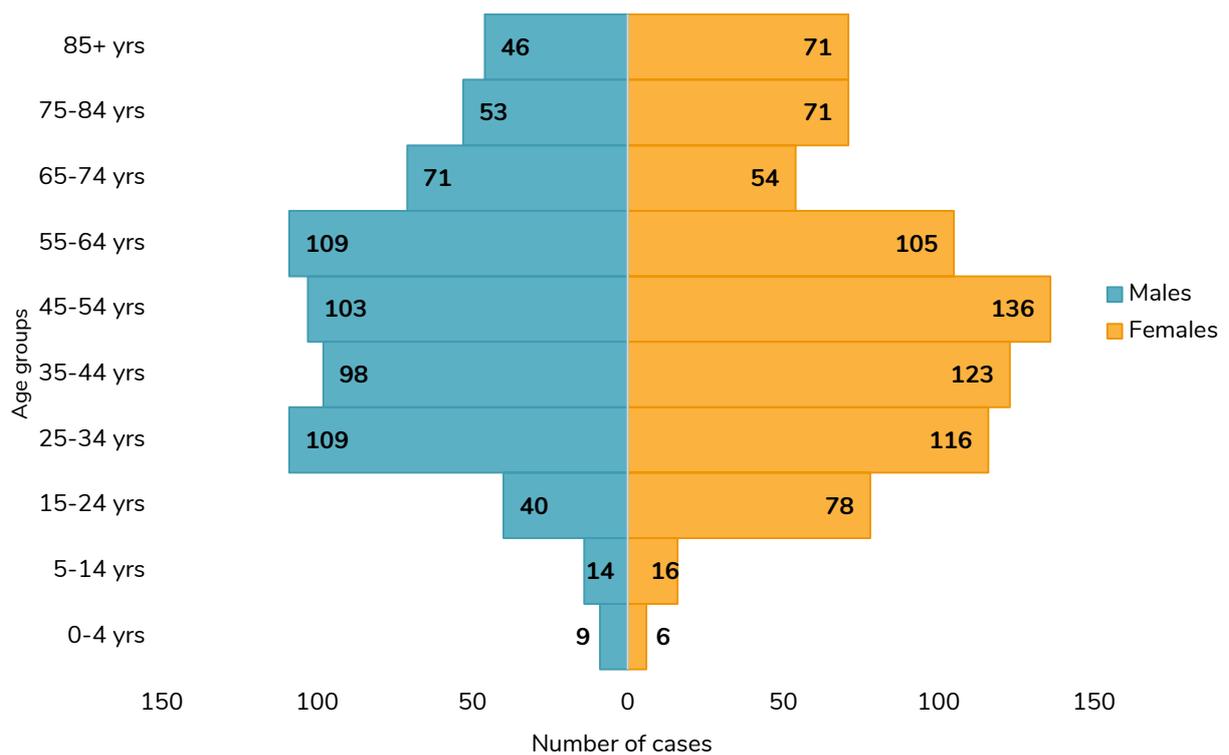


Table three presents the number of confirmed cases that were hospitalised by age group in the Mid-West up to midnight 01 August 2020. A higher proportion of those aged 65 years and over were hospitalised when compared to younger age groups. Over half (56.5%) of 75-84 year olds were hospitalised.

Table 3: Number of confirmed COVID-19 cases hospitalised and admitted to ICU by age group in the Mid-West up to midnight 01/08/2020

Age Group (Years)	Number of cases (n)	Cases hospitalised (n)	Cases hospitalised (%)	Cases admitted to ICU (n)
0-4 years	15	<5	-	0
5-14 years	30	<5	-	0
15-24 years	118	<5	-	0
25-34 years	225	15	6.7	0
35-44 years	221	22	10.0	<5
45-54 years	239	26	10.9	<5
55-64 years	214	44	20.6	7
65-74 years	125	50	40.0	6
75-84 years	124	70	56.5	0
85+ years	117	36	30.8	0

Table four presents the number of confirmed cases notified to the Department of Public Health, Mid-West by most likely transmission source (MLTS) up to midnight 01 August 2020. Transmission for the majority of cases was due to close contact with a confirmed case (30.6%) followed by community transmission (25.6%). The travel related cases (6.9%) were primarily in the early weeks of the pandemic.

Table 4: Number of confirmed COVID-19 cases in the Mid-West by most likely transmission source up to midnight 01/08/2020*

Transmission source	Number	Percent
Close contact with a known confirmed case	437	30.6
Community transmission	365	25.6
Healthcare setting acquired: staff	278	19.5
Healthcare setting acquired: patient	249	17.4
Travel related	99	6.9

*Based on provisional data with minor edits made in-house that are yet to be applied to CIDR

4.2.3 Number of deaths

Table five summarises the 93 deaths in COVID-19 cases (all case classifications) in the Mid-West up to midnight 01 August 2020. Overall, 80 (86.0%) deaths were in confirmed cases and 13 (14.0%) deaths were in probable or possible cases. The median age at death was 83 years. Six (6.5%) of the cases who died were admitted to ICU. The majority of cases (88.2%) who died had an underlying clinical condition.

Table 5: Summary of deaths in all COVID-19 cases notified in the Mid-West up to midnight 01/08/2020

	Number	Percent
Total number of deaths	93	
Confirmed	80	86.0
Probable/Possible	13	14.0
Total number of cases hospitalised	60	64.5
Cases admitted to ICU	6	6.5
Cases not admitted to ICU	54	58.1
Number with underlying clinical conditions	82	88.2
Total N male cases	47	50.5
Total N female cases	46	49.5
Median age at death (years)	83.0	

4.2.4 Number of swabs

Approximately 29,300 COVID-19 swabs were processed in ULHG and approximately 700 COVID-19 swabs were processed in the Bon Secours Hospital in Limerick up to 27 September 2020. A considerable number of swabs from the Mid-West are also processed by the NVRL. The NVRL had processed nearly 605,000 swabs from all around the country up to 27 September 2020⁹.

⁹ HPSC Cumulative Report 28 September 2020

4.3 MASS SCREENING AND OUTBREAKS

4.3.1 Mass screening

NPHET decided on 14/04/2020 that the “HSE was to put in place a coordinated national process for carrying out prevalence surveys across nursing homes and other residential healthcare settings, with a particular focus on detecting COVID-19 infections in these settings.” This was due to concern over the rising number of cases in residential settings.

At the NPHET meeting on 17/04/2020, the HSE reported that testing be carried out over a short period of time in long term care facilities commencing with nursing homes. Mass Testing commenced on 17/04/2020. In nursing homes with no previous cases, all residents and staff were tested. In nursing homes with ongoing outbreaks, all residents not yet tested were tested along with all staff. Swabbing was carried out in the 57 residential care facilities in the Mid-West by NAS over a three-week period beginning 17th April 2020. In total, 2,429 residents were tested and 117 residents tested positive for COVID-19. A total of 3,610 staff were tested and 78 tested positive for COVID-19. As a result of this mass swabbing, outbreaks were confirmed in five residential care facilities in the Mid-West.

Subsequently NPHET requested that the HSE implement a programme to perform weekly COVID-19 testing for all staff in residential care facilities for older persons commencing 22/06/2020 for four weeks. During this four week testing period, seven staff in five residential care facilities for older persons tested positive for COVID-19 in the Mid-West. There was no evidence of transmission within the facilities and therefore mass screening of residents was not required.

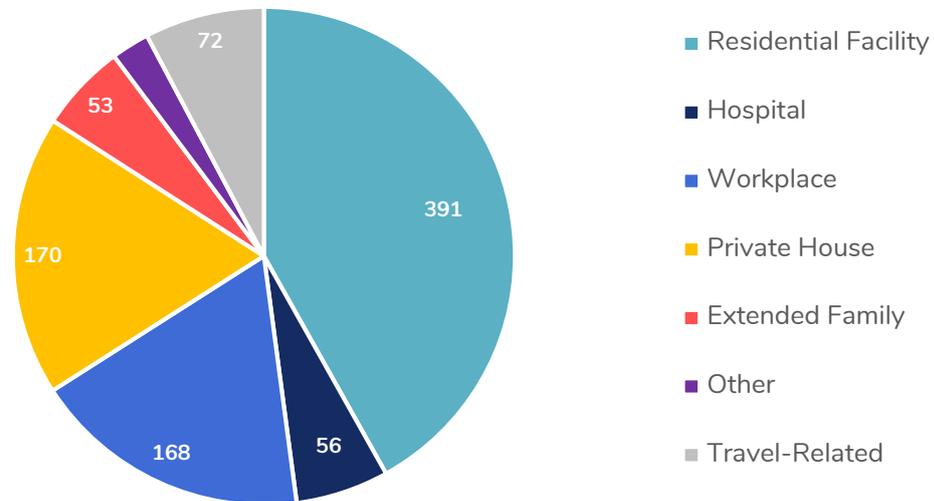
There has also been mass swabbing at other facilities in the Mid-West such as meat factories and other congregate settings including disability centres and direct provision centres.

4.3.2 Summary of outbreaks

Cases in the Mid-West have been linked to local outbreaks, outbreaks in other public health regions and national outbreaks. Of the 1,443 cases (all case classifications) of COVID-19 in the Mid-West up to 01 August 2020, 933 (64.7%) cases were identified as being part of a confirmed outbreak¹⁰. The majority of these cases (41.9%) were linked to outbreaks in residential facilities, family clusters in private homes (18.2%) and workplace outbreaks (18%) (Figure 4).

¹⁰ Definition of outbreak: <https://www.hpsc.ie/notifiablediseases/casedefinitions/outbreak/> [Date accessed 01/10/2020]

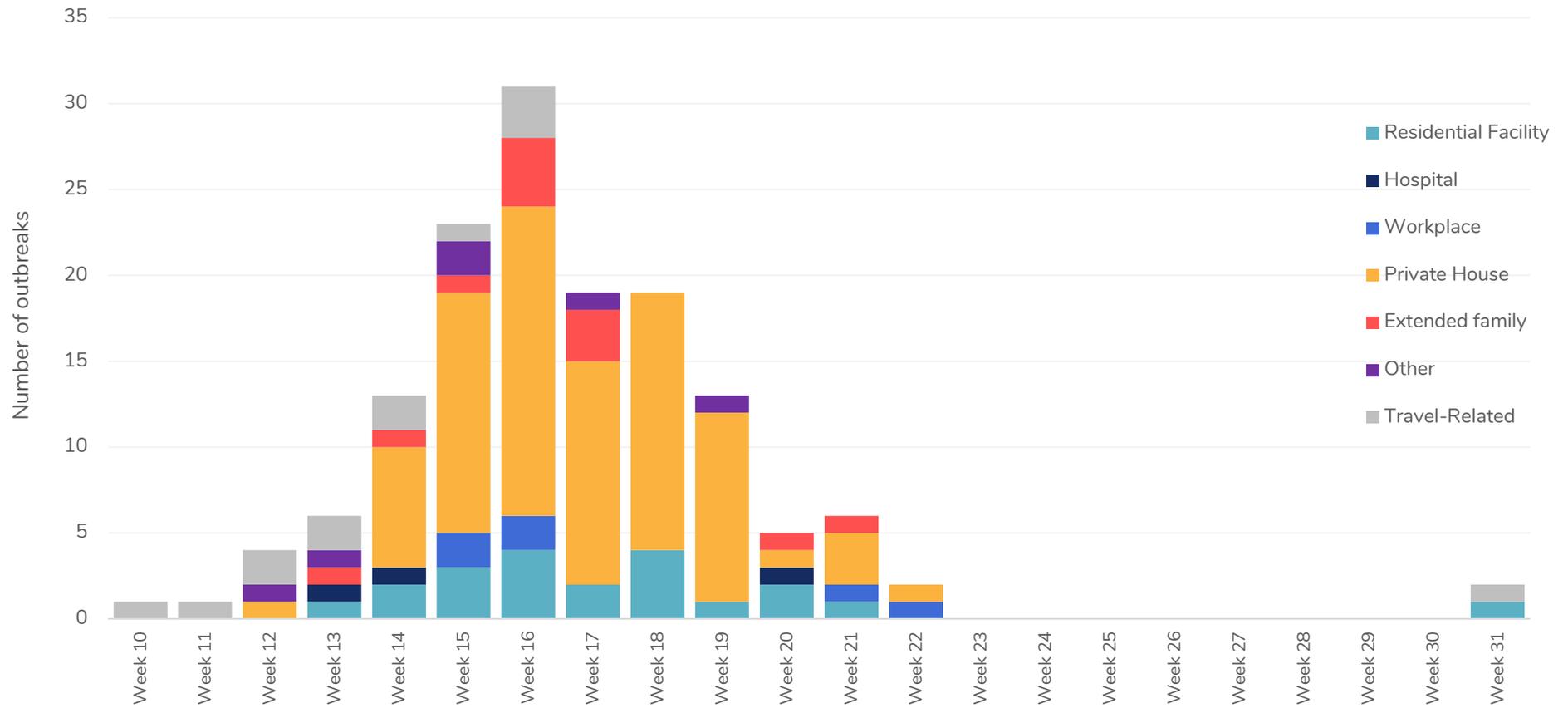
Figure 4. Number of COVID-19 cases in the Mid-West up to midnight 01 August 2020 linked to a confirmed COVID-19 outbreak, by outbreak location*



*Based on provisional data with minor edits made in-house that are yet to be applied to CIDR

Our department identified, managed and reported 145 confirmed outbreaks of COVID-19 up to 01 August 2020 (Figure 5). Over half (57.9%) these outbreaks were in private homes and 12 (8.3%) were in extended families (transmission between family members to >1 private home). Twenty-one (14.5%) outbreaks were in residential facilities which included nursing homes, community hospitals, residential disability services and direct provision centres. Three outbreaks in hospitals, six outbreaks in workplaces and thirteen travel-related outbreaks were also identified.

Figure 5. Number of confirmed COVID-19 outbreaks identified and managed by the Department of Public Health, HSE Mid-West up to midnight 01 August 2020



5. COVID-19 in the Mid-West from 02/08/2020 to midnight 19/09/2020

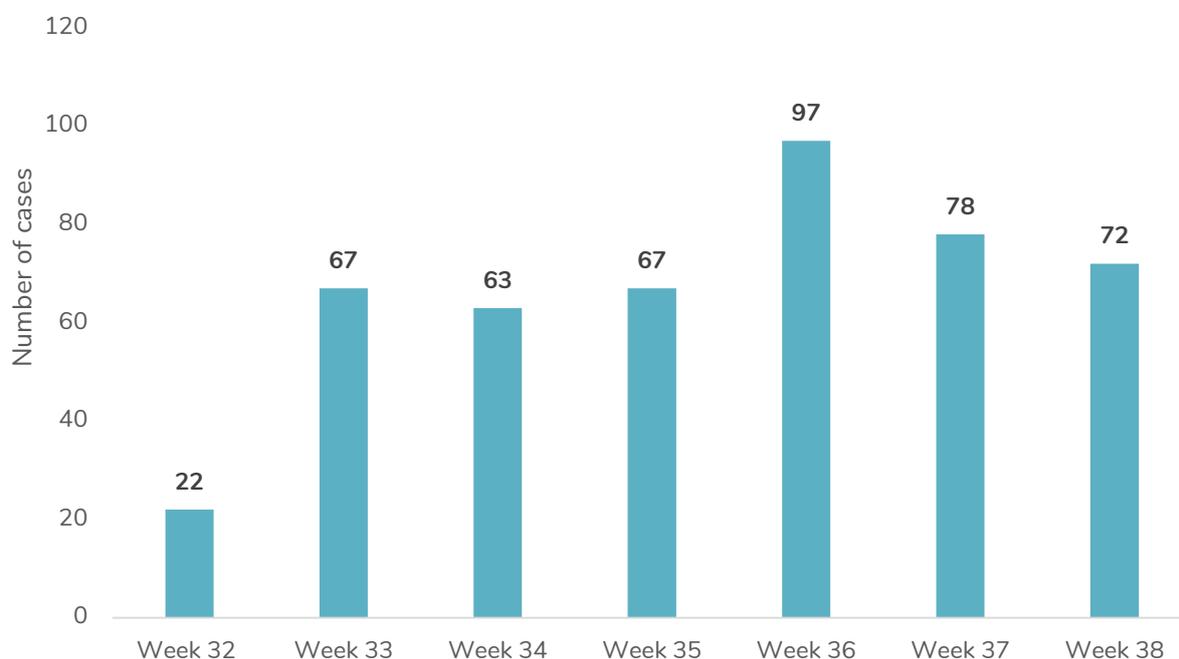
This chapter provides a brief overview of confirmed COVID-19 cases notified to the Department of Public Health, HSE Mid-West between 02 August 2020 and 19 September 2020. These data were extracted from CIDR on 22/09/2020 at 9.45pm. All data in the report are preliminary and are subject to change.

5.1 NUMBER OF CASES AND DEMOGRAPHIC CHARACTERISTICS

Between 02/08/2020 and 19/09/2020, an additional 466 confirmed cases of COVID-19 were notified to the Department of Public Health, HSE Mid-West. Figure 6 presents the number of cases by week over this seven-week period.

Overall, 296 of these cases were in Limerick, 135 were in Clare and 35 were in North Tipperary. In total, 229 cases were males and 237 cases were females. The age range of cases ranged from 0 years to 89 years. The median age was 30 years. Table 6 presents the number of confirmed cases by age group. Table 6 also presents the number of cases requiring hospitalisation. In total, 20 confirmed cases required hospitalisation over this seven-week period.

Figure 6. Number of confirmed COVID-19 cases in the Mid-West per week* from 02/08/2020 to 19/09/2020



*Weeks end at midnight on Saturday

Table 6. Number of confirmed COVID-19 cases by age group, hospitalisation and ICU status in the Mid-West between 02/08/2020 and 19/09/2020

	0-24 years	25-54 years	55+ years	Total
N confirmed cases	185	182	99	466
N cases hospitalised	-	-	-	20
N cases admitted to ICU	0	<5	0	<5

5.2 CASE TRANSMISSION OVER TIME

The data below indicates that there are significant differences in how COVID-19 has been transmitted over time. Transmission for the majority of cases continues to be through close contact with a known confirmed case. However, in the early months of the pandemic, there was more travel related transmission and healthcare setting acquired transmission of COVID-19 when compared to recent weeks (Figure 7). Identifying the MLTS of each case is a key feature in assisting public health departments manage and control the spread of COVID-19.

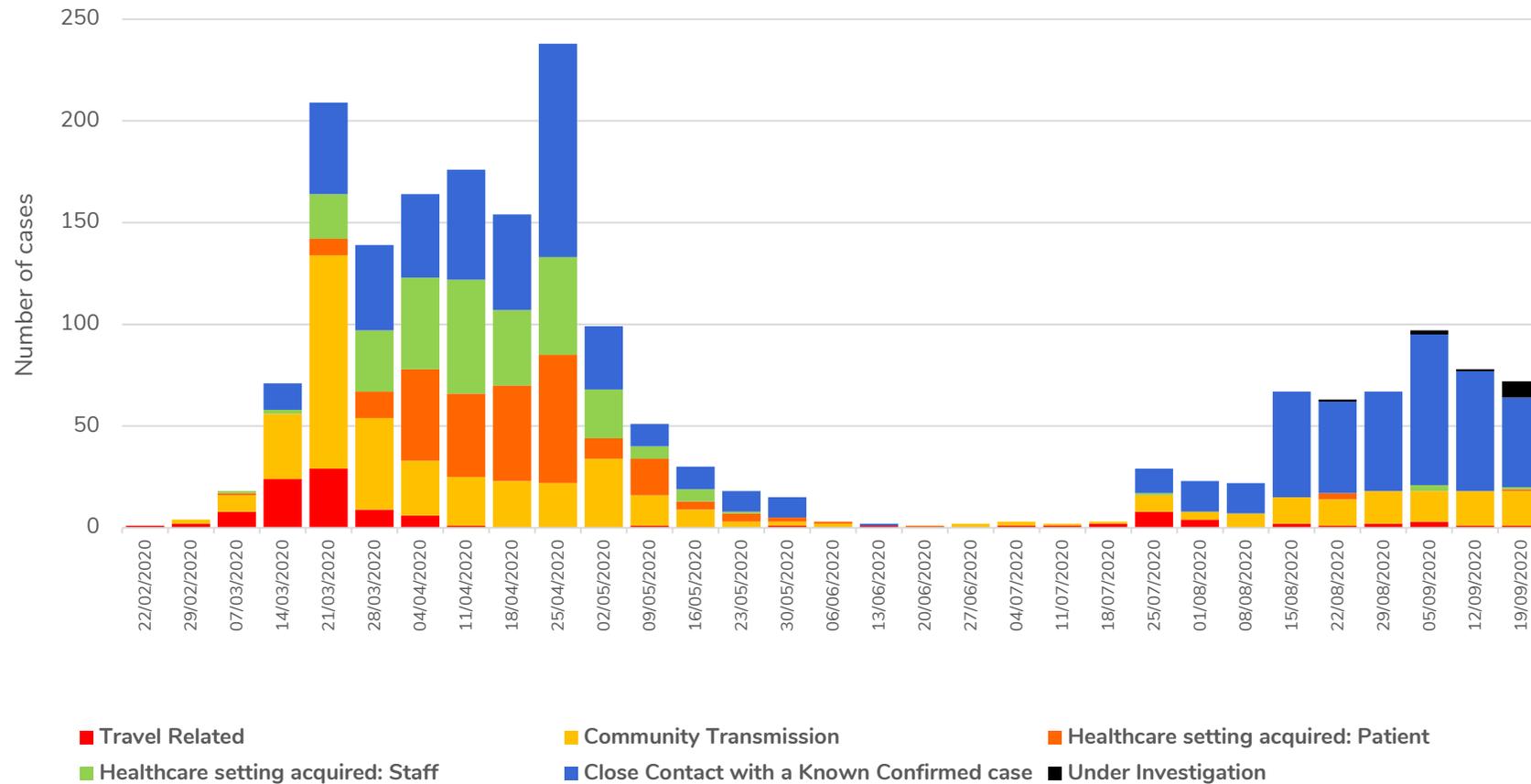
Figure 8 is an example of how COVID-19 can spread within the community. Key details have been altered in this example to protect the identity of these cases. The black circle indicates the index case. The index case was abroad on his holidays but he did not restrict his movements as per the current HSE guidelines when he got home. He had mild symptoms including a runny nose and a mild sore throat. He checked his temperature and it was normal. He felt reassured by this and socialised with a group of friends. He later tested positive for COVID-19. However, by this stage, he had already infected a number of his friends. Three of these friends went on to infect their families.

Another friend who he infected felt unwell and contacted her GP to arrange a COVID-19 test. She had the test in the morning but by afternoon she felt a bit better and decided to go to a friend's party. After the party, she got her test result and it was positive. By attending the party while waiting for her test result, she ended up infecting a number of other people.

The index case has a close extended family who visit each other's houses regularly. This led to some extended family members also getting infected with COVID-19. One of his extended family members who had no symptoms played a match with his local team and a number of his teammates were infected as a result. The team members then went on to infect a number of people.

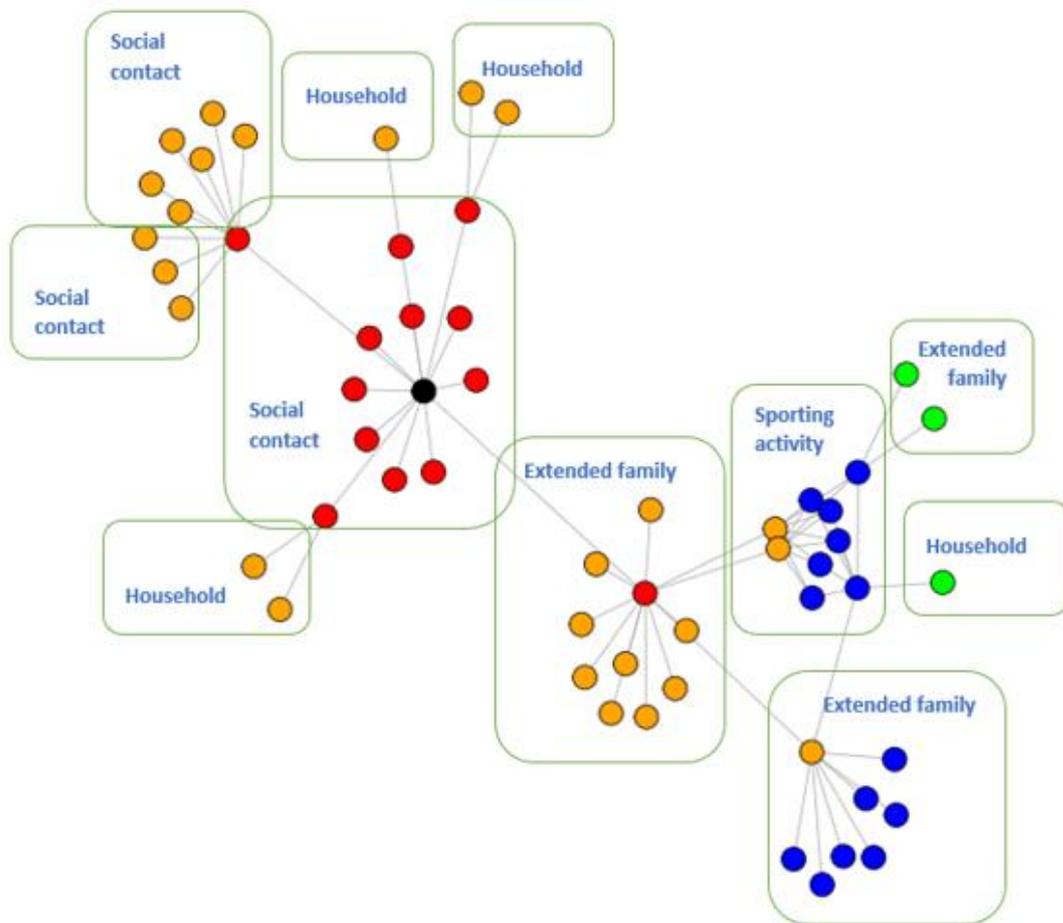
In total, 56 cases were infected from the index case, affecting up to 10 private households and a sports team.

Figure 7. Most Likely Transmission Source in confirmed COVID-19 cases by week in the Mid-West up to midnight 19 September 2020, by epidemiological date*



*The epidemiological date represents the earliest of onset date, date of diagnosis, laboratory specimen collection date, laboratory received date or event creation/notification date.

Figure 8: An example of community transmission of COVID-19 in the Mid-West*



*See text on page 36 and 37 for explanation of Figure 8

6. Next steps

6.1 KEY CHALLENGES, LESSONS LEARNT AND DEVELOPMENT NEEDS

Over the past few months, COVID-19 has been an unprecedented challenge for our department. The impact of COVID-19 resulted in our department focusing solely on our health protection function to tackle the disease. In the midst of this rapidly evolving pandemic, we experienced an unprecedented volume of work. This section summarises key challenges, lessons learned and development needs for the department highlighted by the ongoing COVID-19 pandemic.

6.1.1 Communication

- The response to the pandemic strengthened existing relationships between our department and our colleagues in ULHG, Mid-West Community Healthcare, NAS and with healthcare facilities (e.g. nursing homes, residential facilities) throughout the Mid-West. This collaborative and interagency working enabled us to provide and receive timely support and advice when necessary. Further work and resources are needed to sustain and build these relationships and to further integrate public health with local services.
- As COVID-19 is a new disease, the case definition and criteria for testing and the management of the disease were updated frequently in line with national and international evidence. Adapting to these constant, albeit unavoidable changes was extremely challenging.
- Last minute requests for information were common and dealing with such requests was a challenge.

- Maintaining a good internal chain of communication within the department was challenging. This was partly due to social distancing guidelines resulting in a reduced number of staff attending the daily COVID-19 meetings.

6.1.2 Staffing

- In the early stages of the pandemic, the department underwent a rapid organisational re-structure. A large number of staff were redeployed to assist the department. This was very beneficial though these staff often required extensive training which was time consuming. The vast majority of these staff have now returned to their substantive posts. Recruitment of staff is ongoing.
- The service increased to a 7-day week service with extended working days. Staff worked extremely long hours and it was hard to get adequate time off. This was stressful for staff and their families. It has been acknowledged that public health departments have been under staffed for some time but this pandemic highlighted the urgent requirement for adequate and consistent staffing across all grades. The recent announcement and approval to recruit extra staff to the Department of Public Health is most welcome.

6.1.3 IT infrastructure

- The pandemic has highlighted the significant underinvestment in an appropriate national IT case and outbreak management system for public health. In the absence of an adequate case management system with contact tracing functionality, the CMP system was developed rapidly at a national level to enable contact tracing of non-complex cases. The development of this system was welcome and lessened the burden of contact tracing on local public health departments. As yet it has no capacity to assist in case

investigation, outbreak identification or management, although this is planned.

- Public health has required a national IT case/outbreak management system for some time. Prior to COVID-19, the HSE planned to procure a system which could collate data for surveillance purposes, case management, reporting requirements and incident/outbreak control. The use of multiple ICT systems to capture case/outbreak data creates an undue administrative burden within the department.
- Within our department, an outbreak management system called OMS was developed to assist with contact tracing and identifying COVID-19 outbreaks in the Mid-West. This was a difficult process to have to undergo in the middle of managing a pandemic. This system has been very useful for clinical staff within the department but has been challenging from a data quality perspective. OMS does not interact with the national surveillance system CIDR. Continued IT support is needed to enable data linkage between systems.
- The ongoing development of the robotic transfer of data from CMP to CIDR, and the robotic processing of results and creating of cases is a welcome addition.

6.2 PREVENTION MESSAGES

Adhering to public health guidelines is important. There are a number of key prevention messages that need to be clearly and consistently communicated over the coming months. Key measures to reduce the spread of COVID-19 include:

- Stay at home if you feel unwell
- Avoid crowded places
- Maintain your social distance (2 metres)
- Wear a face covering in shops and other indoor settings and on public transport
- Wash your hands
- Practice good respiratory hygiene
- Reduce your number of social contacts¹¹

Increased seasonal flu vaccine uptake is encouraged this year to help keep people well. At-risk groups and those aged 70 years and over can access the vaccine free of charge. The nasal vaccine will also be made available free of charge to all children aged 2 to 12 years this year¹².

¹¹ <https://www2.hse.ie/coronavirus/> [Date accessed 03/09/2020]

¹² <https://www.hse.ie/eng/health/immunisation/pubinfo/flu-vaccination/about-the-vaccine/> [Date accessed 03/09/2020]

7. Summary

7.1 PUBLIC HEALTH RESPONSE

The Department of Public Health, HSE Mid-West has worked extremely hard to respond to COVID-19 in a timely and coordinated way. We have worked with local and national partners to help tackle COVID-19. In the early stages of the pandemic, the department had to quickly adapt to rapidly changing information, daily challenges, and the management of complex cases and outbreaks. We struggled in the absence of an appropriate IT infrastructure. The department received considerable support from redeployed staff in the early stages of the pandemic, but most have returned to their substantive posts.

7.2 EPIDEMIOLOGY OF COVID-19 IN THE MID-WEST

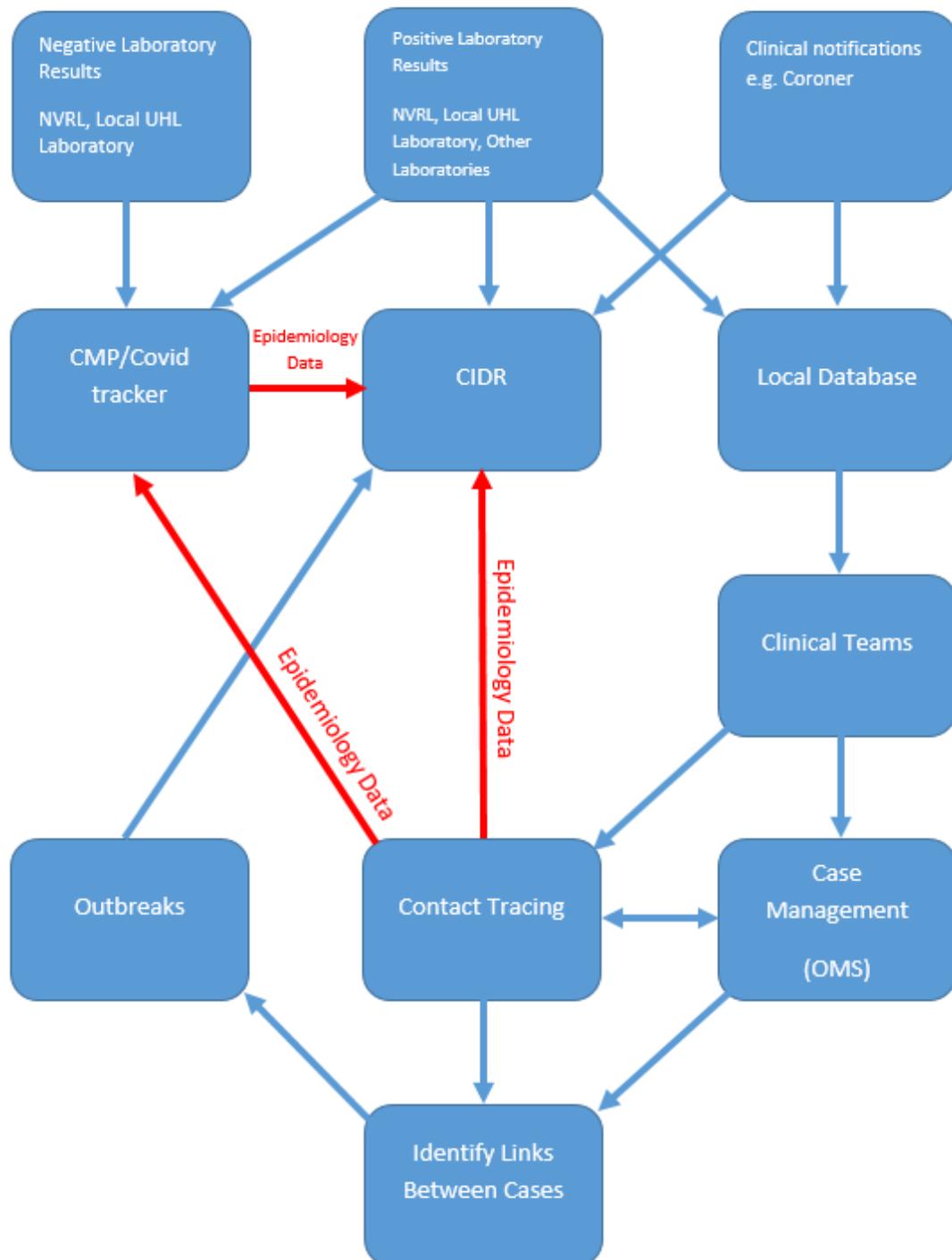
There were 1,894 confirmed cases of COVID-19 notified to the Department of Public Health, HSE Mid-West up to and including midnight 19 September 2020. Overall, 905 confirmed cases were in Limerick, 527 were in Clare and 462 were in North Tipperary. Two hundred and ninety-three of these cases were hospitalised. One in five cases were in HCWs.

7.3 LESSONS LEARNT AND NEXT STEPS

Processes, communication, staffing and ICT all need to be improved going forward to ensure that we can tackle COVID-19 in an effective, timely and efficient manner. Recruitment of staff is underway as it is vital we have sufficient public health staff to protect the population of Limerick, Clare and North Tipperary.

Appendix 1

Process flowchart demonstrating the management of COVID-19 results in the Department of Public Health, HSE Mid-West



List of abbreviations

AHP	Allied Health Professional
CCTT	Complex Contact Tracing Team
CIDR	Computerised Infectious Disease Reporting System
CMP	Contact Management Programme
CPHOG	COVID Public Health Operational Group
EAG	Expert Advisory Group
ECDC	European Centre for Disease Control
HCW	Healthcare worker
HPSC	Health Protection Surveillance Centre
HSE	Health Service Executive
ICU	Intensive Care Unit
MLTS	Most Likely Transmission Source
NAS	National Ambulance Service
NOCT	National Outbreak Control Team
NPHET	National Public Health Emergency Team
NPHORT	National Public Health Outbreak Response Team
NVRL	National Virus Reference Laboratory
OMS	Outbreak Management System
PICT	Pandemic Incidence Control Team
PPE	Personal Protective Equipment
SMO	Senior Medical Officer
SPHM	Specialist in Public Health Medicine
UL	University of Limerick
ULHG	University of Limerick Hospitals Group
WHO	World Health Organization
WTE	Whole Time Equivalent

Protect. Prevent. Improve.

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