

# IDCU

INFECTIOUS DISEASE PREVENTION AND CONTROL UNIT  
HEALTH PROMOTION AND DISEASE PREVENTION DIRECTORATE

RELEVANT INFO: DIPHTHERIA, POLIO, MMR, CHILDHOOD DISEASES, INVASIVE GRP A STREPTOCOCCUS, INFLUENZA & RSV, VACCINES, HEALTH SCREENING FOR WORK PERMITS, UNVACCINATED PATIENTS

## DIPHTHERIA

Diphtheria is an acute vaccine preventable disease caused by toxin-producing bacteria *C. diphtheriae* and *C. ulcerans*. Diphtheria infection can cause both **respiratory symptoms as well as non-respiratory symptoms** that affect different parts of the body such as the skin.

Throughout 2022 an unusual increase in cases of diphtheria (toxigenic *C. diphtheriae*) among migrants aged 8 to 44 years old in different EU/EEA countries as well as Switzerland and the UK was noted. ([ECDC CDTR 23-29 Oct 2022](#)). Although cases among migrants are not unexpected, the increasing number of cases is unusual and should be monitored. For further information please see the [ECDC Rapid Risk Assessment](#) from 6 October 2022.

### POSSIBLE CASE DEFINITION FOR DIPHTHERIA (EU case definition):

*Patient with symptoms of classic respiratory, mild respiratory or cutaneous diphtheria.*

*(An upper respiratory tract illness with laryngitis or nasopharyngitis or tonsillitis WITH/WITHOUT an adherent membrane/pseudo membrane. In case of cutaneous diphtheria or diphtheria of other*

*sides, skin lesions or lesions of conjunctiva or mucous membranes)*

### Clinical features:

- Majority present with sore throat and low-grade fever during first days
- Some might further develop a dense membrane in mucous membranes (tonsils, pharynx, larynx and nose) or even a swollen “bull’s neck appearance. This can be followed by possible obstruction of the airway.
- Possible effect on other organs such as myocarditis, paralytic symptoms and nephritis

**Mode of transmission:** Mainly through droplets, but also contact with wounds or lesions of infected person. Travel, close contact with cattle, and eating raw dairy products are all potential risk factors for infection

**Incubation period:** 2-5 days

**Prevention:** Vaccine

**Risk group/s:** Those in close contact with/ from same household as an infected individual

**Treatment:** Antitoxin and antibiotics

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## Diagnosis & Measures:

If suspected case identified:

- Isolate patient
- Avoid contact without PPEs
- Notify Public Health and IDCU immediately
- Collect samples for confirmation of diagnosis

## POLIOMYELITIS

Poliomyelitis is a vaccine-preventable systemic viral infection that affects the motor neurons of the central nervous system (CNS). Historically it was a major cause of mortality, acute paralysis, and lifelong disability but large-scale immunisation programmes have eliminated polio from most areas of the world

There are three distinct serotypes of wild polio virus (WPV): Type 1, 2, 3.

- **Type 1** endemic in Pakistan and Afghanistan
- **Type 2** and 3 eradicated worldwide
- **Circulating-Vaccine Derived Polioviruses (cVDPV)** – rare form of polio occurring in areas of low-vaccination coverage

Infection or immunization with one serotype does not induce immunity against the others.

cVDPV has now been detected in US, UK and Israel – with signs of limited community transmission while WPV re-appeared in Southeast Africa – after the Africa Region was declared polio-free by WHO.

**Even a single case of poliomyelitis is considered an outbreak and requires *immediate* action. If an unexplained case of Acute Flaccid Paralysis is identified, particularly in children <15 years,**

**please contact Public Health immediately on 79004731/79847219**

## Clinical features:

### Presentation:

- Range of clinical presentations ranging from sub-clinical to paralysis and death
- Majority asymptomatic, one-fourth experience mild symptoms (fever, headache, pharyngitis)
- Paralytic poliomyelitis <1% of infections

### Symptoms:

- Spinal poliomyelitis: meningitis, severe myalgia and localised sensory and motor symptoms, followed by weakness and paralysis in 1-2 days
- Weakness classically asymmetrical, flaccid paralysis that peaks 48hr after onset – termed **acute flaccid paralysis (AFP)**
- Paralysis may progress for up to 1 week

### Mode of transmission:

- Humans only known reservoir for polio virus
- Transmitted via droplets or aerosols and faecal contamination of utensils, hands, food and water
- Mostly via person-to-person contact or faeco-oral route
- Oro-oral route transmission possible

**Incubation period:** 7-10 days (range 4-35 days)

### Prevention:

- Vaccine
  - AFP surveillance – gold standard
  - Environmental surveillance
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### Risk group/s:

- All unvaccinated individuals
- Children <15 years

### Treatment:

- No specific treatment available for acute poliomyelitis
- Symptomatic and supportive management

### Diagnosis & Measures:

If suspected case identified:

- Isolate patient
- Avoid contact without PPEs
- Notify Public Health and IDCU immediately
- Collect stool samples for confirmation of diagnosis

*Consider poliomyelitis as a differential diagnosis of AFP particularly so for children <15 years*

## MEASLES, MUMPS AND RUBELLA

### MEASLES

#### Clinical Criteria

Any person with *fever* AND *maculo-papular rash*

AND at least one of the following three:

- *Cough*
- *Coryza*
- *Conjunctivitis*

#### Laboratory Criteria

At least one of the following four:

- Isolation of measles virus from a clinical specimen

— Detection of measles virus nucleic acid in a clinical specimen

— Measles virus specific antibody response characteristic for acute infection in serum or saliva

— Detection of measles virus antigen by DFA in a clinical specimen using measles specific monoclonal antibodies

Laboratory results need to be interpreted according to the vaccination status. If recently vaccinated, investigate for wild virus

### Epidemiological criteria

An epidemiological link by human-to-human transmission

### Case Classification

A. **Possible case:** Any person meeting the **clinical criteria**

B. **Probable case:** Any person meeting the **clinical criteria** with an epidemiological link

C. **Confirmed case:** Any person not recently vaccinated and meeting the **clinical** and the laboratory criteria

### Investigation:

One can test for measles either by carrying out a throat/nasopharyngeal swab test taken using a VTM swab kit or through serological testing.

N.B. IF PATIENTS DO NOT HAVE THE ABOVE CLINICAL CRITERIA, DO NOT TEST FOR MEASLES. IT MIGHT RESULT IN A **FALSE POSITIVE** RESULT

MEASLES IgM TEST IS **NOT INDICATED** FOR SCREENING PURPOSES AND IF PATIENT HAS NO RASH REQUEST AN IgG TEST **ONLY** TO CHECK FOR IMMUNITY

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## MUMPS

### Clinical Criteria

Any person with *fever*

AND at least one of the following three:

- *Sudden onset of unilateral or bilateral tender swelling of the parotid or other salivary glands* without other apparent cause
- *Orchitis*
- *Meningitis*

### Investigation:

One can test for mumps either by carrying out a throat/nasopharyngeal swab test taken using a VTM swab kit or through serological testing.

N.B. IF PATIENTS DO NOT HAVE THE ABOVE CLINICAL CRITERIA, DO NOT TEST FOR MUMPS. IT MIGHT RESULT IN A **FALSE POSITIVE** RESULT

MUMPS IgM TEST IS **NOT INDICATED** FOR SCREENING PURPOSES. REQUEST AN IgG TEST **ONLY** TO CHECK FOR IMMUNITY

## RUBELLA

### Clinical Criteria

Any person with sudden onset of *generalised maculo-papular rash*

AND at least one of the following five:

- *Cervical adenopathy*
- *Sub-occipital adenopathy*
- *Post-auricular adenopathy*
- *Arthralgia*
- *Arthritis*

### Investigation:

Investigation for rubella is by means of serological testing.

N.B. IF PATIENTS DO NOT HAVE THE ABOVE CLINICAL CRITERIA, DO NOT TEST FOR RUBELLA. IT MIGHT RESULT IN A **FALSE POSITIVE** RESULT

RUBELLA IgM TEST IS **NOT INDICATED** FOR SCREENING PURPOSES AND IF PATIENT HAS NO RASH REQUEST AN IgG TEST **ONLY** TO CHECK FOR IMMUNITY

### SCREENING TESTS TO CHECK FOR IMMUNITY (IgG) INCLUDE:

- TORCH infections
  - Toxoplasma gondii
  - Others such as [Treponema pallidum](#), [varicella zoster virus \(VZV\)](#), [parvovirus B19](#), and [human immunodeficiency virus \(HIV\)](#)
  - Rubella
  - Cytomegalovirus
  - Herpes Simplex virus
- MMR infections (for work permits, medical tests)

## CHILDHOOD DISEASES

During these months there is an increase in the number of cases of certain childhood diseases. Some gentle reminders with regards to the following specific diseases:

### HAND, FOOT & MOUTH DISEASE

**Cases:** It is normally safe to return to school or work once the symptoms have passed and any blisters have dried over, that means after 5 – 7days.

**Contacts:** As long as they are not exhibiting any signs or symptoms contacts can carry on as normal. However, should any contacts start exhibiting sign or symptoms they should be

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isolated immediately (i.e. not attend school, work, etc)

## SCARLET FEVER

Scarlet fever is one of the 73 [notifiable diseases](#). It is a throat infection associated with a rash which usually affects school children between the ages of 3 and 12. It is caused by a type of bacteria called *Streptococcus pyogenes* and is easily treatable with antibiotics.

Symptoms can appear within 1-5 days of the child becoming infected. These include:

- Fever
- Red and sore throat
- Fine red rash most commonly on the trunk, but also on the limbs, which usually appears within 2 days of having a fever or sore throat and may feel like sandpaper
- Flushing of the face with a whitish circle around the mouth
- Swollen red tongue – strawberry tongue.

It is recommended that children diagnosed with scarlet fever must be kept at home for 5 days after starting antibiotics, which are usually given for a duration of 10 days.

## INVASIVE GROUP A STREPTOCOCCUS

Group A streptococcus (GAS) is a bacterium that can often be found in the throat and on the skin and in most cases does not cause symptoms. Group A streptococcal bacteria can cause pharyngitis/tonsillitis, scarlet fever, impetigo, and cellulitis. In rare cases GAS bacteria can also cause a severe, life-threatening invasive disease (iGAS), which may manifest as bacteraemia, pneumonia, or skin and bone infection (cellulitis, osteomyelitis,

necrotising fasciitis). Children with viral infections such as varicella (chickenpox) or influenza are at higher risk of developing iGAS infection.

During 2022, a number of European countries reported an increase the number of cases of invasive Group A Streptococcus (iGAS) disease among children less than ten years of age. It is important to emphasise that iGAS is defined as an infection of a normally sterile body organ – especially the blood – caused by *Streptococcus pyogenes*. It does not include typical presentations such as tonsillitis or scarlet fever.

During the same period, especially since September, a number of deaths associated with iGAS in children less than 10 years of age have also been reported. These occurrences are most likely due to the fact that children were kept fairly cloistered from respiratory pathogens throughout the COVID-19 pandemic and now that life is largely back to normal, the ability for infections to circulate through the paediatric population has been restored. Currently, there is no indication that the increase in iGAS cases in children is due to a more virulent or transmissible type of *S. pyogenes*.

Invasive GAS infection is associated with isolation of GAS from a normally sterile site, such as blood, cerebrospinal fluid, joint aspirate, pericardial/peritoneal/pleural fluids, bone, endometrium, deep tissue or abscess at operation or post-mortem.

### Early signs and symptoms of necrotising fasciitis include:

- Severe pain and swelling, often rapidly increasing
  - Fever (>38°C)
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- Redness at wound site

### Early signs and symptoms of Streptococcal Toxic Shock Syndrome (STSS) include:

- Sudden onset of generalised or localised severe pain, often in an arm or leg
- Dizziness and /or confusion
- Flu-like symptoms such as fever, chills, muscle aches, nausea, vomiting
- A flat red rash over large areas of the body (only occurs in 1 in 10 cases)

Prevention of viral illnesses is likely to be important in reducing the risk of invasive disease, therefore **vaccination against seasonal influenza and COVID-19** should be promoted. Adequate hand and respiratory hygiene, as well as good indoor ventilation, should continue to be emphasized as the most important protective measures during this winter season. Chemoprophylaxis to prevent GAS infection in contacts of an identified case is not recommended other than in cases of invasive disease, and even then, primarily to immediate family contacts under public health supervision.

Reducing the transmission of GAS will help to reduce the risk of severe iGAS infection. Prompt testing and treatment of GAS infections is encouraged. Group A Streptococcus can be effectively treated with several first line antibiotics. Indeed, local isolates of *S. pyogenes* are 100% sensitive to penicillin, amoxicillin and co-trimoxazole. Unfortunately, local resistance to macrolides has increased to almost 25%. Therefore, empiric treatment of potential GAS infections with formulations such as clarithromycin or azithromycin should be done with laboratory

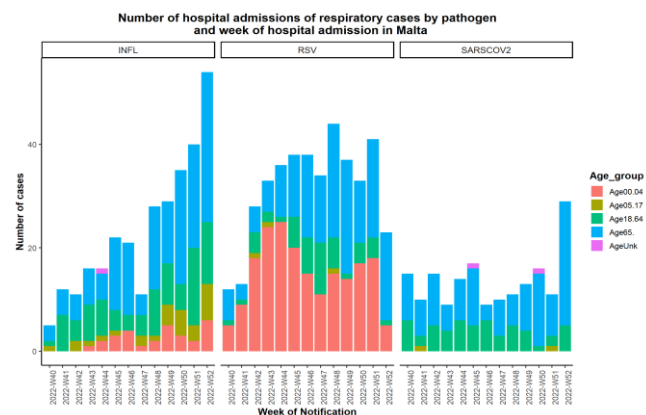
guidance. When first line options are available, use of extensively broad-spectrum antibiotics - such as third generation cephalosporins - to treat GAS is unnecessary and only serves to encourage antibiotic resistance.

At the same time, it is essential that antibiotic prescribing remains judicious and avoided in situations which suggest a viral, rather than bacterial, infection.

It is always strongly advised that where patients are suspected to be suffering from iGAS infection, **these are referred for urgent hospital care.**

## COVID, INFLUENZA & RSV

Graph of hospitalised cases of the 3 main respiratory viruses – Influenza, RSV, Covid19 - between Oct-Dec 2022



## INFLUENZA VACCINE

Given at various health centres according to schedule issued every few days by Primary Health Care

**Adults** – quadrivalent vaccine

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Children – aged 6 months – 17 years can be administered the intranasal vaccine

## COVID VACCINE

As of Thursday 5<sup>th</sup> January 2023, all persons aged 6 months and over are eligible to receive either the Omicron vaccine or the Covid 19 Adapted Booster Vaccination, depending on the protocol relevant for their age.

Anybody who would like further information or to book an appointment is to contact the Telemedicine Client Support Centre on 21 231 231 or 21 222 444.

### CHILDREN – Covid Vaccine Schedule

- Floriana Health Centre - Thursdays 14:30pm-18:30pm
- Mosta Health Centre - Thursdays 14:30pm-18:30pm
- Paola Health Centre- Wednesday 14:30pm-18:30pm
- Xewkija (Gozo) - Wednesday 14:30pm-18:30pm

### ADULTS – Influenza and Covid Vaccine Schedule Health Centres for Malta (Walk-ins):

- Paola Health Centre
  - Mosta Health Centre
  - Floriana Health Centre
  - Kirkop Health Centre
  - Gzira Health Centre
  - Qormi Health Centre
  - Rabat Health Centre
  - Cospicua Health Centre
- The COVID-19 booster can be administered at a minimum of 3 months after previous dose.

- Persons who tested positive for COVID-19 (confirmed) may have the Covid-19 booster after a minimum of 4 weeks of testing positive.

## HPV VACCINE:

HPV vaccine is now being offered to boys aged 12 and 13 years, born in 2011. They will be receiving an invitation letter with an appointment.

## HEALTH SCREENING FOR WORK PERMITS

The IDCU is also responsible for carrying out [health screening](#) for prospective employees who do not form part of the European Union Member State (also known, as third country nationals) as part of their work permit application form.

Part of this health screening includes reviewing the applicant's vaccination/immune status with regards to specific communicable diseases.

Please note that it is MANDATORY that this section of the form is completed by ONE (1) doctor only and the doctor's contact telephone number and email address are clearly written down.

Failure to comply with this will result in the application form NOT being processed.

### Chest X-Rays

Chest X-Rays in which radiological findings are reported (e.g. nodules, granulomas, fibrotic changes, calcifications, etc) are still to be marked **abnormal** even if the report states that there are no active findings of an acute infection. The screening requirements vary depending on the type of job being applied for:



## Polio and Diphtheria

All employees (irrespective of the job they are applying for) **are required** to have full immunity against Polio and Diphtheria.

Applicants can either take 1 dose of Polio/Diphtheria vaccination in Malta or take the Poliovirus and Diphtheria immunity test. Should blood level show low immunity/no immunity, they are required to receive one dose of vaccine.

## Measles (required for certain jobs)

There are certain jobs for which applicants are required (compulsory) to have full immunity against Measles. In these cases, applicants can either take the blood test for IgG Measles or 2 doses of the Measles vaccine.

There are other jobs for which employees will be requested to show that they have immunity against Measles. If they are not immune it is recommended that they take the Measles Vaccine.

## Hepatitis B (required for certain jobs)

Employees who require immunity against Hepatitis B for their line of work, must present blood test for Hepatitis B antibody. This can be omitted if employee received Hepatitis B vaccines in Malta within a 10-year period from the date of application form. Should the Hepatitis B antibody show low immunity, employee is required to complete the vaccination schedule for Hepatitis B at a local private clinic.

## UNVACCINATED PATIENTS

As per the Prevention of Disease Ordinance, Chapter 36, Title III, Article 57, all children aged 3 months and above should be immunised against diphtheria, tetanus and poliomyelitis.

Should you encounter patients who have not been immunised as required by law you are kindly requested to inform the National Immunisation Service on [immunisation@gov.mt](mailto:immunisation@gov.mt) and the IDCU on [idcu@gov.mt](mailto:idcu@gov.mt). Please provide the details of the unvaccinated patient, including contact details, so that they can be contacted by the relevant authorities.

### IDCU TEAM including Health screening unit and Work Permits unit

Dr Tanya Melillo  
Dr Maria Louise Borg  
Dr Liliana Cuschieri  
Dr Elaine Lautier  
Dr Jackie Melillo  
Dr Analita Pace Asciak  
Dr Andrew Spina  
Dr Ercole Spiteri  
Ms. Graziella Rocco  
Ms. Rosanne Mercieca  
Ms Antoinette Attard  
Mr. Warren Bruno

### Telephone (office hours)

+356 23266109/309/185/122/119/

### On-call pager

79004731 – Dr Tanya Melillo

79847219 – Consultants

### Email:

[diseasesurveillance.health@gov.mt](mailto:diseasesurveillance.health@gov.mt)

You can notify the IDCU about an infectious disease using the online Infectious Disease Notification Form

<https://notifyinfectiousdisease.gov.mt>

Also available now on MyHealth

Go to Tab Forms, then green button Forms, then choose Infectious Disease Report



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**Work Permits Unit**

Mr. Stephen Gauci

Mr. Elton Mifsud

Ms Daniela Igna

Ms Marthese Lucas

Ms Christine Fenech

**Health screening Unit**

Ms Therese Cassar

Ms Yvonne Camenzuli

Ms Audrey Brincat

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## SECTION A: Confirmed individual case report, by sex and by quarter

(Q1 – Jan-March; Q2 – April-June; Q3 – July-Sept; Q4 – Oct -Dec).

**Infectious Disease Control Unit – Annual Report – 2022 – Sporadic Cases**

Notifiable Disease	Q1	Q2	Q3	Q4	Male	Female	Unknown Gender	Maltese	Non-Maltese	Unknown Residency	Total
<b>Foodborne diseases</b>											
Campylobacter	93	97	92	78	216	141	3	240	35	85	360
Cryptosporidiosis	1	2	8	7	7	10	1	13	3	2	18
Giardia	5	3	8	4	17	3	-	15	4	1	20
Hepatitis A	-	2	1	4	2	5	-	4	3	-	7
Listeria	-	1	-	-	-	1	-	1	-	-	1
Salmonella	33	23	85	47	106	78	4	128	26	34	188
Typhoid	-	-	-	1	1	-	-	-	1	-	1
Scombrototoxin	-	1	2	1	3	1	-	3	-	1	4
Shiga toxin	9	19	27	20	37	37	1	58	10	7	75
VTEC	3	3	2	2	5	5	-	10	-	-	10
Shigella	2	4	7	5	13	4	1	8	5	5	18
Foodborne, Unspecified	3	34	16	26	42	24	13	46	9	24	79
Echinococcosis	-	-	-	-	-	-	-	-	-	-	-
<b>Bloodborne diseases</b>											
AIDS	-	-	-	-	-	-	-	-	-	-	-
Hepatitis B	5	10	16	19	32	13	5	44	4	2	50
Hepatitis C	2	2	22	27	40	11	2	51	1	1	53
HIV	17	29	32	24	92	10	-	14	88	-	102

<b>Invasive diseases</b>											
Invasive Group A Streptococcus (Streptococcus Pyogenes)	2	-	-	6	6	2	-	6	1	1	8
Invasive Group B Streptococcus (Streptococcus Agalactiae)	-	-	-	-	-	-	-	-	-	-	-
Invasive Haemophilus Influenzae	-	-	-	-	-	-	-	-	-	-	-
Invasive Meningococcal Septicaemia	-	-	-	-	-	-	-	-	-	-	-
Invasive Neisseria Gonorrhoea	-	-	-	1	-	1	-	1	-	-	1
Invasive Streptococcus Pneumoniae	1	3	-	3	6	1	-	6	1	-	7
<b>Meningitis</b>											
Aseptic / Viral Meningitis	-	-	1	5	2	2	2	6	-	-	6
Meningitis, bacterial other than Neisseria Meningitidis cultured	-	-	2	-	2	-	-	2	-	-	2
Meningitis, Haemophilus Influenza	-	-	-	-	-	-	-	-	-	-	-
Meningitis, Neisseria Meningitidis	-	1	-	1	2	-	-	2	-	-	2
Meningitis, Non-Invasive Meningococcal disease (Neisseria meningitides cultured from non-sterile site)	-	-	-	-	-	-	-	-	-	-	-
Meningitis, Streptococcus Pneumoniae	-	1	-	1	1	1	-	2	-	-	2
Meningitis – suspected bacterial (no organism isolated from sterile site)	-	-	2	-	1	1	-	2	-	-	2
Acute Viral Encephalitis (Meningitis)	-	1	-	-	-	1	-	1	-	-	1
<b>Sexually transmitted diseases</b>											
Granular conjunctivitis	-	-	-	-	-	-	-	-	-	-	-
Gonorrhoea- Gonococcal infection	53	46	65	69	200	29	4	119	114	-	232
Syphilis	-	1	4	8	10	3	-	12	1	-	13
Syphilis Latent	12	19	17	31	68	10	1	30	42	8	81
Syphilis Primary	5	5	5	4	17	2	-	10	8	1	19
Syphilis Secondary	6	3	6	4	16	3	-	11	7	1	19
Lymphogranuloma venerum (LGV)	1	-	-	-	1	-	-	-	1	-	1
Mycoplasma Genitalium	1	-	1	10	4	5	3	5	3	4	12
Trichomonas vaginalis (TV)	-	-	-	-	-	-	-	-	-	-	-
Chlamydia	66	78	51	105	216	80	4	139	161	-	300

<b>Respiratory diseases</b>											
Legionnaire's Disease	1	-	4	4	5	4	-	8	1	-	9
Tuberculosis, Non-Pulmonary	4	4	5	2	7	7	1	3	13	-	15
Tuberculosis, Pulmonary	15	6	16	10	35	10	2	5	42	-	47
Influenza	2	-	-	4	2	3	1	5	1	-	6
Smallpox	-	-	-	-	-	-	-	-	-	-	-
SARS	-	1	-	-	1	-	-	1	-	-	1
Pneumonia	-	-	-	-	-	-	-	-	-	-	-
Scarlet Fever	-	-	-	10	4	5	1	10	-	-	10
<b>Vaccine preventable diseases</b>											
Chickenpox	6	13	20	21	23	28	9	58	1	1	60
Measles	-	-	-	-	-	-	-	-	-	-	-
Mumps	1	1	-	1	2	1	-	2	1	-	3
Pertussis	-	-	-	-	-	-	-	-	-	-	-
Rubella	-	-	-	-	-	-	-	-	-	-	-
Shingles, Herpes Zoster	9	7	3	16	18	16	1	35	-	-	35
Tetanus	-	-	-	-	-	-	-	-	-	-	-
Diphtheria	-	-	-	-	-	-	-	-	-	-	-
Polio	-	-	-	-	-	-	-	-	-	-	-
<b>Vector-borne diseases</b>											
Chikungunya	-	-	-	1	-	1	-	1	-	-	1
Dengue	-	1	-	2	2	1	-	1	2	-	3
Leishmaniasis (Cutaneous)	-	-	-	-	-	-	-	-	-	-	-
Leishmaniasis (Visceral)	-	1	-	-	-	1	-	1	-	-	1
Malaria	-	-	2	2	4	-	-	3	1	-	4
Sandfly Fever	-	1	1	-	2	-	-	1	1	-	2
Typhus, Tick-borne (Rickettsia)	-	1	4	2	2	4	1	6	1	-	7
Typhus, Scrub	-	-	-	-	-	-	-	-	-	-	-
Typhus, Epidemic	-	-	-	-	-	-	-	-	-	-	-
West Nile Fever	-	-	1	-	1	-	-	1	-	-	1
Yellow Fever	-	-	-	-	-	-	-	-	-	-	-
Schistosomiasis	-	-	-	-	-	-	-	-	-	-	-

<b>Zoonotic diseases</b>											
Brucellosis	-	-	-	-	-	-	-	-	-	-	-
Cryptosporidiosis (Zoonotic)	-	-	-	-	-	-	-	-	-	-	-
Echinococcosis (Zoonotic)	-	-	-	-	-	-	-	-	-	-	-
Leptospirosis	-	-	-	2	2	-	-	2	-	-	2
Q-Fever	1	-	1	-	1	-	1	2	-	-	2
Toxoplasmosis	3	1	4	2	1	8	1	8	2	-	10
Ebola	-	-	-	-	-	-	-	-	-	-	-
Marburg	-	-	-	-	-	-	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-	-	-	-
Rabies	-	-	-	-	-	-	-	-	-	-	-
Tularaemia	-	-	-	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-	-	-	-
Yersinia	-	-	-	-	-	-	-	-	-	-	-
Erysipelas	-	-	-	-	-	-	-	-	-	-	-
<b>Other diseases</b>											
Acute Flaccid Paralysis	-	-	-	-	-	-	-	-	-	-	-
Classical Creutzfeldt - Jakob Disease	-	1	-	1	1	1	-	2	-	-	2
Variant Creutzfeldt - Jakob Disease	-	-	-	-	-	-	-	-	-	-	-
Scabies	9	8	7	17	21	15	5	22	13	6	41
Acute Viral Encephalitis	-	-	-	1	1	-	-	1	-	-	1
	370	432	545	603	1301	579	70	1455	275	220	

**Section B: Cases involved in clusters/outbreaks, by sex and by quarter.**

## Infectious Disease Control Unit – Annual Report – 2022 – Outbreaks

The figures in brackets indicate the number of implicated outbreaks/clusters.

Notifiable Disease	Q1	Q2	Q3	Q4	Male	Female	Unknown	Maltese	Non-Maltese	Unknown	Total
<b>Foodborne diseases</b>											
Campylobacter	6	15	6	12	15	10	14	14	2	23	<b>39(12)</b>
Cryptosporidiosis	2	2	9	5	11	3	4	5	3	10	<b>18(6)</b>
Giardia	-	-	-	-	-	-	-	-	-	-	-
Hepatitis A	-	-	-	-	-	-	-	-	-	-	-
Listeria	-	-	-	-	-	-	-	-	-	-	-
Salmonella	-	-	14	14	9	8	11	13	1	14	<b>28(10)</b>
Scombrototoxin	-	-	5	3	2	3	3	2	-	6	<b>8(2)</b>
Shiga toxin/ VTEC	-	-	5	-	3	2	-	1	2	2	<b>5(3)</b>
Shigella	-	7	6	8	5	3	13	4	3	14	<b>21(6)</b>
Typhoid	-	-	-	-	-	-	-	-	-	-	-
Foodborne, Unspecified	24	73	13	16	74	54	-	118	10	-	<b>128(20)</b>
Foodborne, Norovirus	48	3	4	15	40	35	-	70	-	-	<b>70(5)</b>
Foodborne, Rotavirus	-	-	-	40	30	10	-	40	-	-	<b>40(7)</b>
Echinococcosis	-	-	-	-	-	-	-	-	-	-	-
<b>Bloodborne diseases</b>											
AIDS	-	-	-	-	-	-	-	-	-	-	-
Hepatitis B	-	-	-	-	-	-	-	-	-	-	-
Hepatitis C	-	-	-	-	-	-	-	-	-	-	-
HIV	-	-	-	-	-	-	-	-	-	-	-
<b>Invasive diseases</b>											
Invasive Group A Streptococcus (Streptococcus Pyogenes)	-	-	-	-	-	-	-	-	-	-	-
Invasive Group B Streptococcus (Streptococcus Agalactiae)	-	-	-	-	-	-	-	-	-	-	-

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Invasive Haemophilus Influenzae	-	-	-	-	-	-	-	-	-	-	-	-
Invasive Meningococcal Septicaemia	-	-	-	-	-	-	-	-	-	-	-	-
Invasive Neisseria Gonorrhoea	-	-	-	-	-	-	-	-	-	-	-	-
Invasive Streptococcus Pneumoniae	-	-	-	-	-	-	-	-	-	-	-	-



**Meningitis**

Aseptic / Viral Meningitis	-	-	-	-	-	-	-	-	-	-	-
Meningitis, bacterial other than Neisseria Meningitidis cultured	-	-	-	-	-	-	-	-	-	-	-
Meningitis, Haemophilus Influenza	-	-	-	-	-	-	-	-	-	-	-
Meningitis, Neisseria Meningitidis	-	-	-	-	-	-	-	-	-	-	-
Meningitis, Non-Invasive Meningococcal disease (Neisseria meningitidis cultured from non-sterile site)	-	-	-	-	-	-	-	-	-	-	-
Meningitis, Streptococcus Pneumoniae	-	-	-	-	-	-	-	-	-	-	-
Meningitis – suspected bacterial (no organism isolated from sterile site)	-	-	-	-	-	-	-	-	-	-	-
Acute Viral Encephalitis (Meningitis)	-	-	-	-	-	-	-	-	-	-	-
<b>Sexually transmitted diseases</b>											
Granular conjunctivitis	-	-	-	-	-	-	-	-	-	-	-
Gonorrhoea- Gonococcal infection	-	-	-	-	-	-	-	-	-	-	-
Syphilis	-	-	-	-	-	-	-	-	-	-	-
Syphilis Latent	-	-	-	-	-	-	-	-	-	-	-
Syphilis Primary	-	-	-	-	-	-	-	-	-	-	-
Syphilis Secondary	-	-	-	-	-	-	-	-	-	-	-
Lymphogranuloma venerum (LGV)	-	-	-	-	-	-	-	-	-	-	-
Mycoplasma Genitalium	-	-	-	-	-	-	-	-	-	-	-
Trichomonas vaginalis (TV)	-	-	-	-	-	-	-	-	-	-	-
Chlamydia	-	-	-	-	-	-	-	-	-	-	-
<b>Respiratory diseases</b>											
Legionnaire’s Disease	-	-	-	-	-	-	-	-	-	-	-
Tuberculosis, Non-Pulmonary	-	-	-	-	-	-	-	-	-	-	-
Tuberculosis, Pulmonary	-	-	-	-	-	-	-	-	-	-	-
Influenza	-	-	-	4	1	3	-	4	-	-	<b>4(1)</b>
Smallpox	-	-	-	-	-	-	-	-	-	-	-
SARS	-	-	-	-	-	-	-	-	-	-	-
Pneumonia	-	-	-	-	-	-	-	-	-	-	-

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Scarlet Fever

-	-	-	-	-	-	-	-	-	-	-	-
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**Vaccine preventable diseases**

Chickenpox	-	-	2	-	1	1	-	1	-	1	<b>2(1)</b>
Measles	-	-	-	-	-	-	-	-	-	-	-
Mumps	-	-	-	-	-	-	-	-	-	-	-
Pertussis	-	-	-	-	-	-	-	-	-	-	-
Rubella	-	-	-	-	-	-	-	-	-	-	-
Shingles, Herpes Zoster	-	-	-	-	-	-	-	-	-	-	-
Tetanus	-	-	-	-	-	-	-	-	-	-	-
Diphtheria	-	-	-	-	-	-	-	-	-	-	-
Polio	-	-	-	-	-	-	-	-	-	-	-

**Vector-borne diseases**

Chikungunya	-	-	-	-	-	-	-	-	-	-	-
Dengue	-	-	-	-	-	-	-	-	-	-	-
Leishmaniasis (Cutaneous)	-	-	-	-	-	-	-	-	-	-	-
Leishmaniasis (Visceral)	-	-	-	-	-	-	-	-	-	-	-
Malaria	-	-	-	-	-	-	-	-	-	-	-
Sandfly Fever	-	-	-	-	-	-	-	-	-	-	-
Typhus, Tick-borne (Rickettsia)	-	-	-	-	-	-	-	-	-	-	-
Typhus, Scrub	-	-	-	-	-	-	-	-	-	-	-
Typhus, Epidemic	-	-	-	-	-	-	-	-	-	-	-
West Nile Fever	-	-	-	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-	-	-	-
Schistosomiasis	-	-	-	-	-	-	-	-	-	-	-

<b>Zoonotic diseases</b>											
Brucellosis	-	-	-	-	-	-	-	-	-	-	-
Cryptosporidiosis (Zoonotic)	-	-	-	-	-	-	-	-	-	-	-
Echinococcosis (Zoonotic)	-	-	-	-	-	-	-	-	-	-	-
Leptospirosis	-	-	-	-	-	-	-	-	-	-	-
Q-Fever	-	-	-	-	-	-	-	-	-	-	-
Toxoplasmosis	-	-	-	2	1	1	-	2	-	-	<b>2(1)</b>
Ebola	-	-	-	-	-	-	-	-	-	-	-
Marburg	-	-	-	-	-	-	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-	-	-	-
Rabies	-	-	-	-	-	-	-	-	-	-	-
Tularaemia	-	-	-	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-	-	-	-
Yersinia	-	-	-	-	-	-	-	-	-	-	-
Erysipelaz	-	-	-	-	-	-	-	-	-	-	-
<b>Other diseases</b>											
Acute Flaccid Paralysis	-	-	-	-	-	-	-	-	-	-	-
Classical Creutzfeldt - Jakob Disease	-	-	-	-	-	-	-	-	-	-	-
Variant Creutzfeldt - Jakob Disease	-	-	-	-	-	-	-	-	-	-	-
Scabies	28	16	17	35	26	26	44	32	13	51	<b>96(26)</b>
Acute Viral Encephalitis	-	-	-	-	-	-	-	-	-	-	-

### Section C: Reported deaths from notifiable infectious diseases in Malta, 2022

Only 2 cases of deceased were reported to IDCU so far (up till publication) 1: Invasive Group A streptococcus  
1: Dengue fever.