Supplementary Appendix

1. Methods

Data collection

Data collection is done through a computer application using the principle of the blind experiment, in which the individuals who enter the data of the participants do not have access to the result, and the person performing the test does not know the identity of the participant. The information is recorded in a database managed by the Ministry of Health in accordance with Law 15/2003, of 18 December, qualified as personal data protection) complies with all the rules on Privacy Policy established in https: // coronavirus .govern.ad / privacy

The data used in epidemiological studies will be those provided by individuals using these forms, and will receive a legitimate treatment specifically in Article 20.f of the LQPD which requires that the data be kept indefinitely, so action will be taken. specific security features of this treatment such as the encryption of the data as long as there is no study that requires them. In this case, the only recipients of personal (non-anonymized) data that have been provided to date, without limiting that the list may be legitimately expanded in the future, are the Andorra Health Care Service (SAAS) and the Government of Andorra, including its Ministries that have access to the data due to the epidemic.

Note that both the Department of Government Statistics and the World Health Organization (WHO) or other organizations in other countries will receive data of the Ministry of Health.

The following variables were collected (Figure 4).

- Socio-demographic data: identification number, name, surname, age, parish of residence, occupation.

- Identification number of the family nucleus associated with each participant.

- Symptoms present or absent 15 days before the survey or at the moment of the survey.

- Presence or absence of IgG and IgM immunoglobulins of each participant in the first and second cross.

- PCR result (positive / negative) of IGM + participants (suitable for PCR following protocol of the Ministry of Health).

2. Supplementary tables

Table 1. Timetable of the restrictions in Andorra

March 2	First coronavirus case confirmed in Andorra.
March 12	Ski stations were closed
March 13	Partial confinement.
March 16	Schools were closed
March 18	Total confinement.
April 7	Beginning of masks delivery and progressive use of population
April 17	Allowance of 1 hour of walk in 1km radius every two days
April 20	Phase 1 reopening. Low risk economic activities resume. 1000 people return to work.
May 1	Start training and screening volunteers.
May 4	Start of 1st round of population serology screening.
May 4	Phase 2 reopening. Additional 4760 workers return to normal activity.
May 13	Increase to 2 hours of activity every day to walk or exercise.
May 18	Start of 2nd round of population serology screening. Phase 3 reopening. Additional 3300 workers return to normal activity.
June 1	Confinement restrictions completely lifted.
June 15	French and Spanish borders are open (with some restrictions on the Spanish side).

Table 2. Interpretation of SARS-CoV-2 serologic test

Day-0	Day-14	Interpretation	Recommendation
IgM - IgG +	IgM- IgG+	Past and cured infection	No isolate
IgM - IgG -	IgM - IgG -	No infected	No isolate
IgM + IgG +	IgM - IgG +	Past infection	Isolate 7 days or confirming test RT-PCR
IgM + IgG -	IgM - IgG +	Recent infection	Isolate 14 days or confirming test RT-PCR
IgM - IgG -	IgM + IgG -	Acute infection	Isolate 14 days or confirming test RT-PCR

Table 3. Serology RDT Livzon validation

A. Samples with a COVID-19 diagnostic by any technique

Antibody	Diagnosis COVID-19 positive/ Negative serology	Pre-pandemic/ Positive serology	Pre-pandemic/ Negative serology	Diagnosis COVID-19 positive/ Positive serology	Total	SE (%)	SP (%)	PPV (%)	NPV (%)	Days since onset of symptoms
IgM	42	2	125	59	228	58	98	97	75	Any
IgG	37	1	127	73	238	66	99	99	77	Any
IgM+IgG	31	3	124	77	235	71	98	96	80	Any
IgM	9	2	125	23	159	72	98	92	93	≥ 14 days
IgG	8	1	127	29	165	78	99	97	94	≥ 14 days
IgM+IgG	8	3	124	29	164	78	98	91	94	≥ 14 days
IgM	9	2	125	17	153	65	98	89	93	≥ 21 days
IgG	8	1	127	22	158	73	99	96	94	≥ 21 days
IgM+IgG	8	3	124	22	157	73	98	88	94	≥ 21 days

Legend tables: An evaluation of the RDT was performed at the ISGlobal laboratory (Barcelona, Spain) in August 2020 following FIND recommendations (https://www.finddx.org/covid-19/sarscov2-eval-immuno/). The study tested 119 plasma/serum samples from individuals with a confirmed past/current diagnosis of COVID-19, including 109 rRT-PCR-confirmed positive samples, and 129 prepandemia negative controls. We found that the combined sensitivity (IgM-IgG) ranged from 0.72 - 0.78 depending on the days since symptoms onset and 0.71 – 0.81 when positive samples where PCR-confirmed (supplementary table). Specificity ranged from 0.98 – 0.99.
SE, sensibility, SP, specificity; PPV, positive predictive value; NPV, negative predictive value.

### B. Samples with a COVID-19 diagnostic by PCR

Antibody	Diagnosis COVID-19 positive/ Negative serology	Pre-pandemic/ Positive serology	Pre-pandemic/ Negative serology	Diagnosis COVID-19 positive/ Positive serology	Total	SE (%)	SP (%)	PPV (%)	NPV (%)	Days since onset of symptoms
IgM	40	2	125	53	220	57	98	96	76	Any
IgG	35	1	127	66	229	65	99	99	78	Any
IgM+IgG	29	3	124	70	226	71	98	96	81	Any
IgM	7	2	125	20	154	74	98	91	95	≥ 14 days
IgG	6	1	127	25	159	81	99	96	95	≥ 14 days
IgM+IgG	6	3	124	25	158	81	98	89	95	≥ 14 days
IgM	7	2	125	17	151	71	98	89	95	≥ 21 days
IgG	6	1	127	21	155	78	99	95	95	≥ 21 days
IgM+IgG	6	3	124	21	154	78	98	88	95	≥ 21 days

SE, sensibility, SP, specificity; PPV, positive predictive value; NPV, negative predictive value.

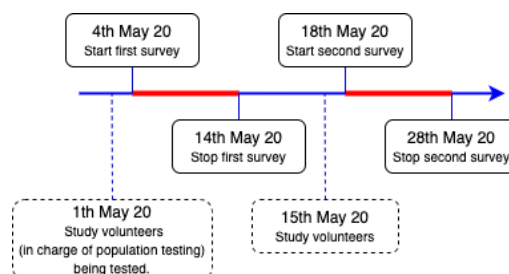**Table 4. Participants situation in front of infection in each contact**

Serological Test Combination	First Cross N=70,500	Second Cross N=63,735
IgM-/IgG-	63,584 (90.19%)	58,281 (91.44%)
IgM+/IgG-	4,277 (6.07%)	3,541 (5.56%)
IgM+/IgG+	1,683 (2.39%)	1,234 (1.94%)
IgM-/IgG+	837 (1.19%)	649 (1.02%)
Not conclusive or miss value	119 (0.17%)	30 (0.05%)

Figure 1. Epidemic curve of COVID19 cases in Andorra from up to end of May 2020
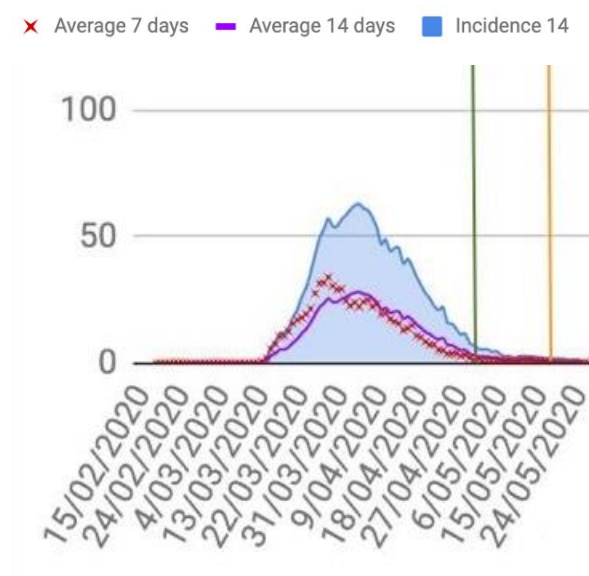
The green line represents the start date of the first seroprevalence survey. The yellow line represents the start of the second seroprevalence survey.

Figure 2. Study Timetable

Figure 3. Participant's questionnaire

- *Identification Number:*
- *Name:*
- *Surname:*
- *Cell phone number:*
- *Email:*
- *Parish:*
- *Covid-19 related Symptoms today:*
- *Covid-19 related Symptoms in last 15 days:*
- *Health care worker:*
- *Student:*
- *Referent physician:*

Figure 4. Survey algorithm
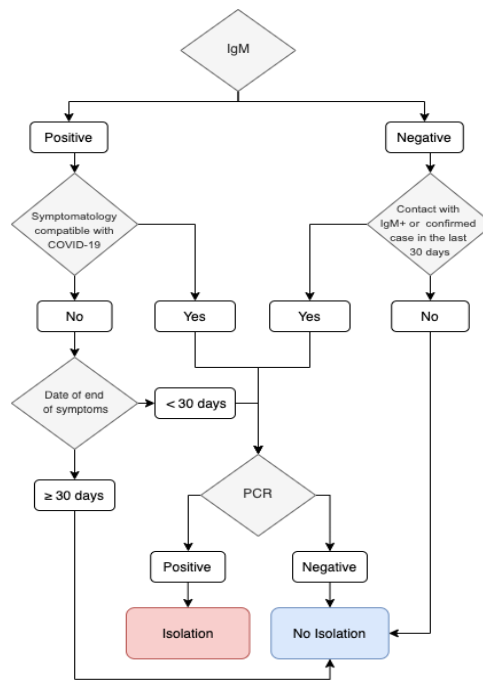
Figure 5. Regional distribution by seasonal worker

Regional distribution by seasonal worker

Ordino 2,7%
La Massana 13,8%
Escaldes d engordany 7,4%
Encamp 27,2%
Andorra la vella 8,3%
Canillo 39,4%