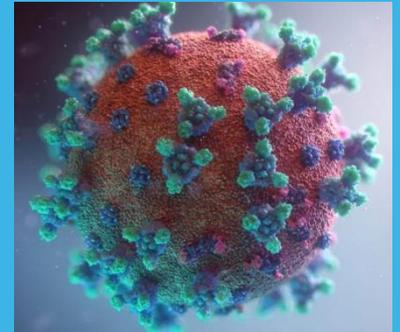




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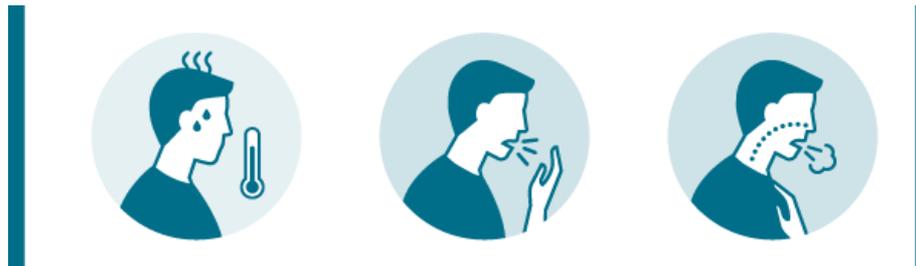
Politécnico de Coimbra



COVID-19: a game-changer for higher education environment at Coimbra Health School

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- Public health crisis-stricken by the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), which causes COVID-19.
- Evidence and worldwide experience add knowledge daily, helping to make collective decisions concerning public health.
- The unprecedented spread of SARS-CoV-2, the high rate of transmission and the collapse of health systems in several countries have made COVID-19 the worst "modern" pandemic



CRISIS MANAGEMENT IN THE COVID-19 CONTEXT IN PORTUGAL

Following global guidelines and concerns Portugal, declared the emergency state on March 19, based on a public calamity situation, providing the initial control measures considering the pandemic situation.

Events were suspended, schools and non-essential stores were closed, as well as non-essential travels were forbidden and borders closed.

(Oliveira & Fernandes, 2020)

Since then, the level of alert has been adapted to calamity and contingency state in sequence with the positive epidemiological developments.

(Peixoto *et al.*, 2020)

However, recently and due to the increase of active transmission chains, the emergency state was re-declared and national territory was stratified into risk areas.

(Decreto n.o 11-A/2020, 2020; XXII Governo da República Portuguesa, n.d.).

“AIM”

This article was prepared to describe Coimbra Health School's adaptation process, a public higher education institution with approx. 1300 students and 200 employees, devoted to teaching in the area of Health Technologies

CONTEXT OF THE MEASURES ENDORSED FOR HIGHER EDUCATION

The first declaration of the emergency state dictated the closure of several sectors of activity, including higher education institutions. Worldwide, distance education attained special attention as the sole possible method of education.

(Bataineh, Khaleel Bader; Atoum, 2021)

The measures taken in this context, considering the relevance of higher education in the economic and social system, aim to establish the guarantee of essential activities and services in scientific and academic institutions

Table 1 - State of recommendations to higher education institutions

March 13

Suspension of **face-to-face** activities with enhanced operation by video conference or other electronic means, in order to guarantee the normal functioning of teaching activities and the realization of all public evaluations.

March 20

Clarification on essential services to be exempted from limitations associated with the "State of Emergency" within the scope of scientific and academic institutions

Maintenance of activities carried out by scientific research and development entities and activities associated with the diagnosis and prevention of the new coronavirus and prevention of COVID-19; permanent maintenance and safety activities services that guarantee access to food and accommodation in higher education; administrative and financial services, among others.

April 17

Elaboration of plans for a progressive survey of the containment measures motivated by the pandemic COVID-19

Recommendation to draw up plans for the progressive lifting of containment measures, encouraging the adoption of distance learning and teleworking processes, but promoting, whenever possible, their gradual and effective combination with face-to-face activities, specifically aimed at practical, laboratory classes and final assessment's.

April 30

Recommendation to scientific and higher education institutions regarding the cessation of the state of emergency

Reinforcement of the need for a combination of face-to-face and distance activities, with the establishment of general rules on health and hygiene and physical distancing.

Table 1 - State of recommendations to higher education institutions

May 15

Recommendation to scientific and higher education institutions to guarantee the process of phased and responsible reactivation of activities in the presence of students, teachers and researchers

Comprehensive legal framework for carrying out gradual academic and non-academic activities with the presence of students, teachers and researchers alongside with remote working processes, as well as teleworking.

August 4

Recommendation to scientific and higher education institutions for the preparation of the academic year of 2020/2021

Definition of guiding principles for the academic year 2020/21 - guarantee face-to-face activities, adopt realistic procedures, and stimulate innovation and pedagogical modernization.

November 2

Recommendation to scientific and higher education institutions to maintain academic and scientific activities facing the aggravation of the epidemiological situation

Strengthening operational recommendations, maintenance of the guiding principles the academic year 2020/21 and strategic guidance regarding the social base of higher education and recovery centred on knowledge and innovation

EMERGING INFECTION CONTROL COMMITTEE

The commission is responsible for

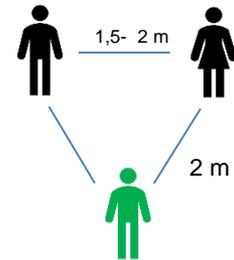
- coordinating the contingency plan's implementation and defining the action plan for teaching activities,
- coordinating efforts and activities with the occupational and environmental health service and with the Regional Health Authorities.
- also ensures compliance with the guidelines defined in the plans, acting on any non-compliance and providing information on the epidemiological context in the community.

CONTINGENCY PLAN

The contingency plan, based on the premises and guidelines of the health authorities, is reviewed and updated according to the evolution of the epidemiological scenario.

The following general prevention and health principles were defined:

- Physical distance (minimum of 1,5 meter) between people,
- Mandatory respiratory protocol actions,
- Personal hygiene, focused on frequent hand washing and, if its washing is impracticable, use of handrub alcohol-based antiseptic solution,
- Reinforce of hygiene and environmental measures, with cleaning, disinfection and adequate ventilation of spaces,
- Renewal of air with negative pressure, whenever feasible,
- Use of collective protection equipment such as barrier methods,
- Mandatory use of Personal Protective Equipements (PPE),
- Reinforce and encouragement of self-monitoring of symptoms,
- Use of the StayAway COVID app.



Human and material resources considered essential were identified.

(Ramírez-Segura *et al.*, 2020)

Information and training of the academic community campaign were initiated.

(European Centre for Disease Prevention and Control, 2014)

Aiming effective case management were outlined different action scenarios, whether dealing with a suspected case of COVID-19 on the premises or a confirmed case.

Imposed by the health authorities, all institutions have an isolation room for suspected infection cases, in compliance with various structural and functional specifications.

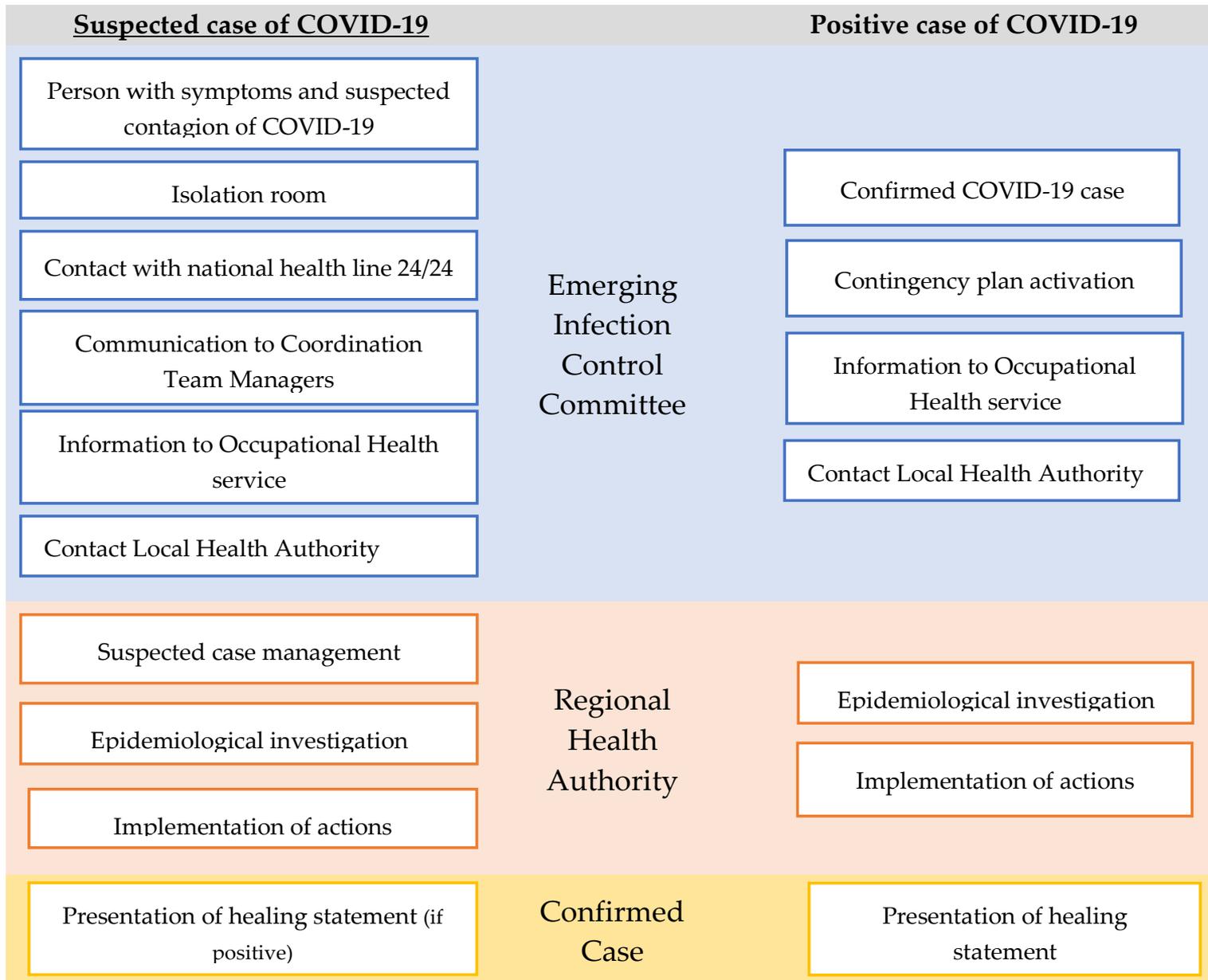


Figure 1 – Flowchart of action before a suspected case and a positive case of COVID-19 at ESTeSC.

Table 2- Measures to be implemented in the context of an outbreak at ESTeSC.

<p>"Outbreak" in a class</p>	<p>Isolation of cases, contact tracking, prophylactic isolation from high-risk contacts, laboratory tests on high-risk contacts</p>
<p>"Outbreak" in several classes without an epidemiological link</p>	<p>Closing of classes with confirmed cases for 14 days from the date of prophylactic isolation from all contacts; closure of one or more areas of the school 14 days from the date of commencement of prophylactic isolation from all contacts</p>
<p>"Outbreak" in several classes with an epidemiological link</p>	<p>Extension of isolation measures to low-risk contacts</p>
<p>"Outbreak" without transmission control</p>	<p>The Local Health Authority, in conjunction with Regional and National Health Authorities, may consider the need to scale up measures, assessing the temporary closure of the campus. Its reopening should occur when the Health Authority determines it, based on the epidemiological situation's control and when it does not represent a risk to the school community.</p>

ACTION PLAN

- A handrub formulation was produced and made available in an initial phase, and
- A disinfecting footbath mat was placed at strategic entrance points.
- Cleaning of frequent hand contact surfaces was reinforced,
- Aeration of all locations and adaptation of the ventilation system to negative pressure in classrooms and offices.



ACTION PLAN

On June, academic (face to face) activities were reactivated exclusively for the practical classes with:

- a previous serological antibody (IgG and IgM anti-SARS-CoV-2) testing campaign for the academic community.

Exceptional measures were taken, namely:

- mandatory use of PPE,
- implementation of barrier methods in the classrooms and public attendance spots and
- the definition of circulation circuits.



ACTION PLAN

Organization of the Academic Year 2020/2021

Hybrid operating model conditioned by the capacity defined for each space.

Combining face-to-face and distance activities, assuming the simultaneity of the face-to-face and distance system.



Alternation of student groups in the two systems.

FINAL CONSIDERATIONS

The measures engaged, with the primary objective of guaranteeing the safety of the academic community, changed the social reality previously known.

Until the present, Coimbra Health School as registered 33 positive cases and 163 contacts regarding prophylactic isolation situations.

The established Committee works daily in the pursuit and full application of prevention and protection measures and case management reported by the academic community.

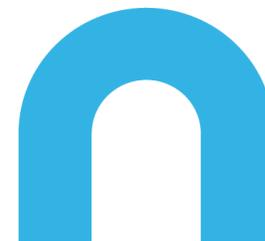
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