

Impact of the COVID-19 Pandemic on Animal Research

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March 10, 2021



Impact of the COVID-19 Pandemic on Animal Research

- Intro to MGH CCM
- Background: What We Knew
- Communication
- Working Safely in the Animal Facility
- Animal Research Activity: Research, Staffing, Support Services
- Continuity Planning
- Lessons Learned



MGH Center for Comparative Medicine (CCM)

- Three locations
- 120 FTE
- Variety of species: majority rodents, rabbits, sheep, swine, NHP



MGH Center for Comparative Medicine (CCM)

Mission

- Provide reliable, affordable, responsive laboratory animal care and research services in pursuit of scientific knowledge and medical breakthroughs
- Avoid or minimize pain and distress in animals under our care
- Maintain a fulfilling, respectful and safe workplace



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What We Knew

March 10, 2020	MA Governor Baker issues a State of Emergency due to pandemic
March 11, 2020	World Health Organization (WHO) has declared the novel coronavirus (COVID-19) outbreak a global pandemic
March 15, 2020	Governor Baker ordered all schools to suspend normal in person instruction.
March 23, 2020	MA Governor Baker issued an emergency order requiring all businesses and organizations that do not provide “COVID-19 Essential Services” to close their physical workplaces and facilities. Order was extended in March 31, April 28, and May 15.
May 18, 2021	With gradual improvements in the public health data, announced a phased reopening approach 1-4.



Impact of the COVID-19 Pandemic on Animal Research: What We Knew

March 10, 2020

- >100,000 global cases, 4000 deaths; ~ 1000 US cases, ~28 deaths
- “Pandemic is not a word to use lightly or carelessly. It is a word that, if misused, can cause unreasonable fear, or unjustified acceptance that the fight is over, leading to unnecessary suffering and death.” WHO
- First pandemic sparked by a coronavirus
- “The best ways to protect yourself are to wash your hands for 20 seconds and avoid touching your face, experts say. They explain that masks are useful for people who are already sick -- so they don't infect others – but wearing a mask won't protect you from the getting the virus”, CBS News reported
- Confusion executing and implementing testing
- Learning about the natural progression of the virus, incubation period?, shedding?
- No cure, no obvious effective treatment, no vaccine



Impact of the COVID-19 Pandemic on Animal Research: What We Knew

May 18, 2020

- 4,700,000 global cases, 317,000 deaths; 1,467,065 US cases, exceed 88,709 deaths
- EUA approval for Remdesivir for certain hospitalized patients
- Moderna's Phase I interim data for a vaccine shows promise
- Masks:
 - People age 2 and older should wear masks in public settings and when around people who don't live in their household.
 - When you wear a mask, you protect others as well as yourself. Masks work best when everyone wears one.



Impact of the COVID-19 Pandemic on Animal Research MGH/CCM Goals

Ensure that the animals in our care continue to receive our standard high quality of care
AND

Provide a safe workplace for our staff and researchers



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Staff & Researcher Communication (CCM)

- Daily email from Senior VP of Research / IO to research community (Harry's Tips)
- Intranet site exclusively for communications and key links for research community
- Twice to once daily huddles CCM SR. Leadership
- Daily huddles Veterinary Services
- Intradepartmental email updates and videos
- CCM TV
- CCM Researcher & Staff Feedback Portal



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Working Safely in the Animal Facility (CCM)

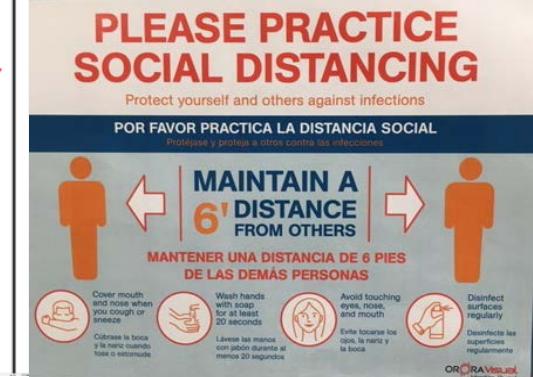
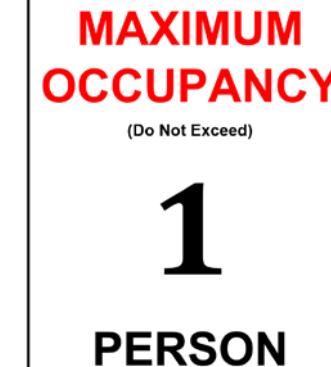
- Covid Safety Officers
- Daily Covid Attestation
- Single entry into buildings
 - Hospital issued surgical masks provided daily for all employees entering buildings and required to be worn on site
 - Provision of hand sanitizer at entrance to buildings and added in other locations



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Working Safely in the Animal Facility: Physical Distancing Team (CCM)

- Determined plan for social distancing and safety practices for CCM personnel and researchers when in CCM facilities
- Maximum occupancy signs on all room doors including air lock
- Face mask signs / etiquette
- Social distancing signs
- Hand hygiene
- Visitor approval
- Sanitization of common shared spaces and equipment
- Scheduling of animal husbandry activities
- Room reservation platform developed for researchers



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Animal Research Activity:

- Ranged from unabated to restrictions
- Research restrictions: ramp down
 - No new research
 - Complete studies if possible
 - Identify research staff to provide care for animals
 - Lab plans provided details of animal care, back-up personnel, contingency planning
 - Rodents
 - Breeding scaled back: separated
 - Cryopreservation offered internally or vendor supported
 - New animal orders, transfers, exports/imports halted
 - Some voluntary culling
 - COVID-related research allowed
 - Only researchers listed on lab plan allowed into facility



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Animal Care Staff (CCM)

- Schedules
 - Ensure alternating schedules for on-site and remote
 - Ensure that staff stayed campus specific
 - Staggered lunches
 - 5 day work week → 7 day
- Animal Care
 - Rodent Cage changes: spectrum of cage changes allowed by various institutional IACUCs
 - Spot changing
 - Cage bottoms only
 - Extended cage changing intervals



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Animal Care Staff Continuity Plan (CCM)

- Staffing Triggers: tiered approach
- Contingencies for High Illness:
 - Cross-training LA / rodent
 - Lab staff assist with husbandry
 - Training other next level personnel for deployment
 - Census reduction



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Research Support Services (CCM)

- Technical Service Support
 - Breeding
 - Other study support
 - Special husbandry
- Other
 - Covid Research
 - Ad hoc PIBC meetings- virtual
 - Ad hoc IACUC meetings – virtual
- Training researchers
 - During ramp down, trainings reduced
 - Portions performed virtually



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Lessons Learned

- Prepare for the worst
- “Lucky”?
- Communication
- Fluid and agile workforce
- COVID-19 pandemic plan reflection
- Connection to hospital ID department & closeness of hospital
- Virtual meetings, incorporate virtual trainings to minimize in person when possible, leverage virtual telemedicine when appropriate
- Room reservation system not successful



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