

ADRD Research Brain Donation in the COVID-19 Era: The UW Experience



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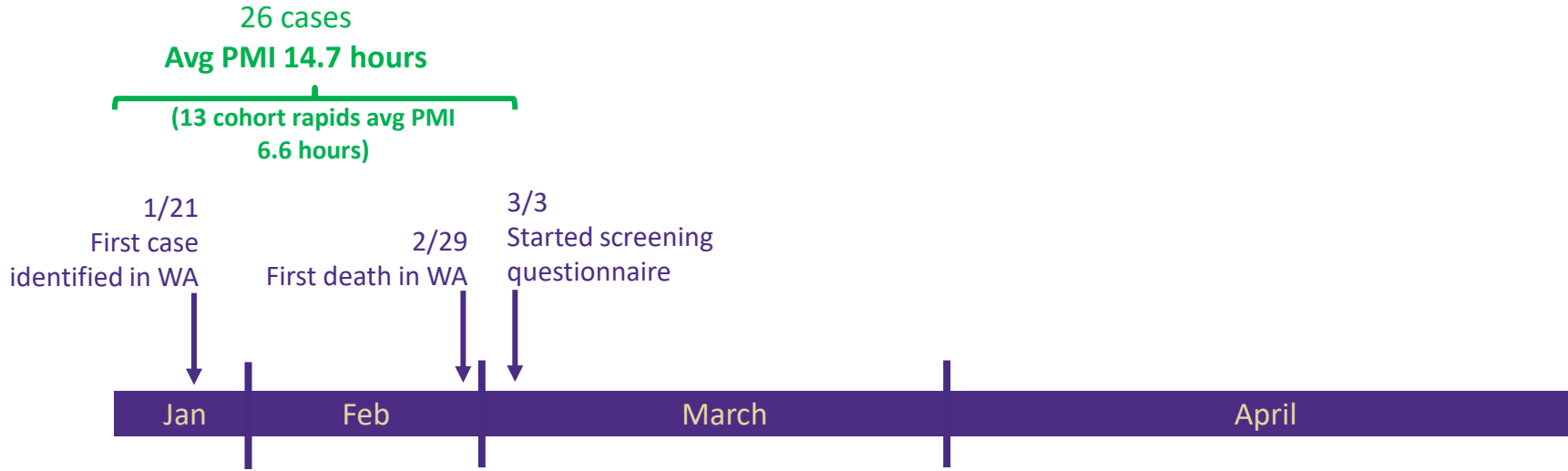
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UW NP Core: Timeline for COVID-19 Outbreak



*Chart to scale for how long each month has felt

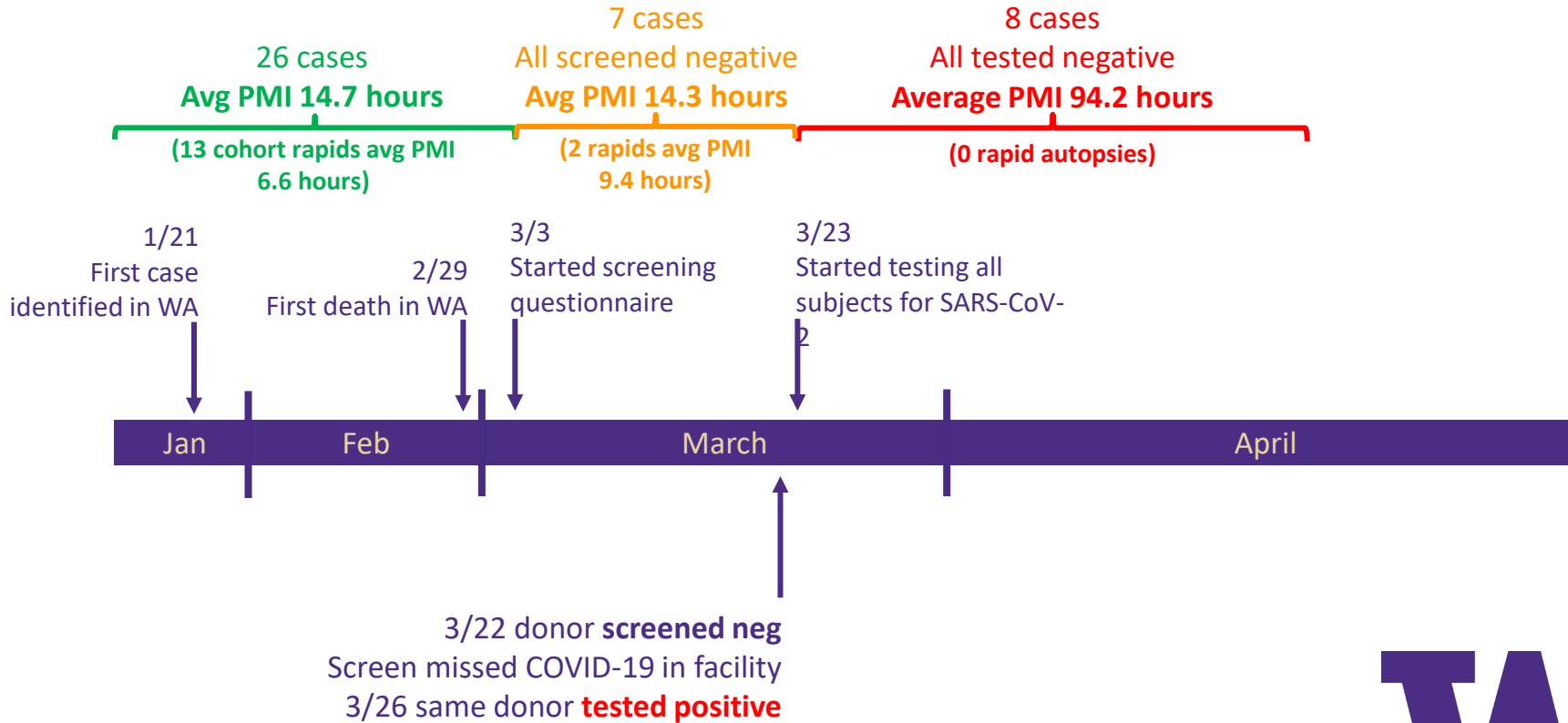


COVID-19 Screening Questions for Potential Donors

- **Clinical history of COVID-19 diagnosis**
- **Suspected COVID-19 diagnosis**
- **Exposure to COVID-19 positive person**
- **COVID-19 infections in care facility where decedent was located near/at time of death**
- **Symptoms of coronavirus infection (from CDC)**
 - > **Cough**
 - > **Shortness of breath or difficulty breathing**
 - > **At least two of the following:**
 - Fever
 - Chills
 - Repeated shaking with chills
 - Muscle pain
 - Headache
 - Sore throat
 - New loss of taste or smell



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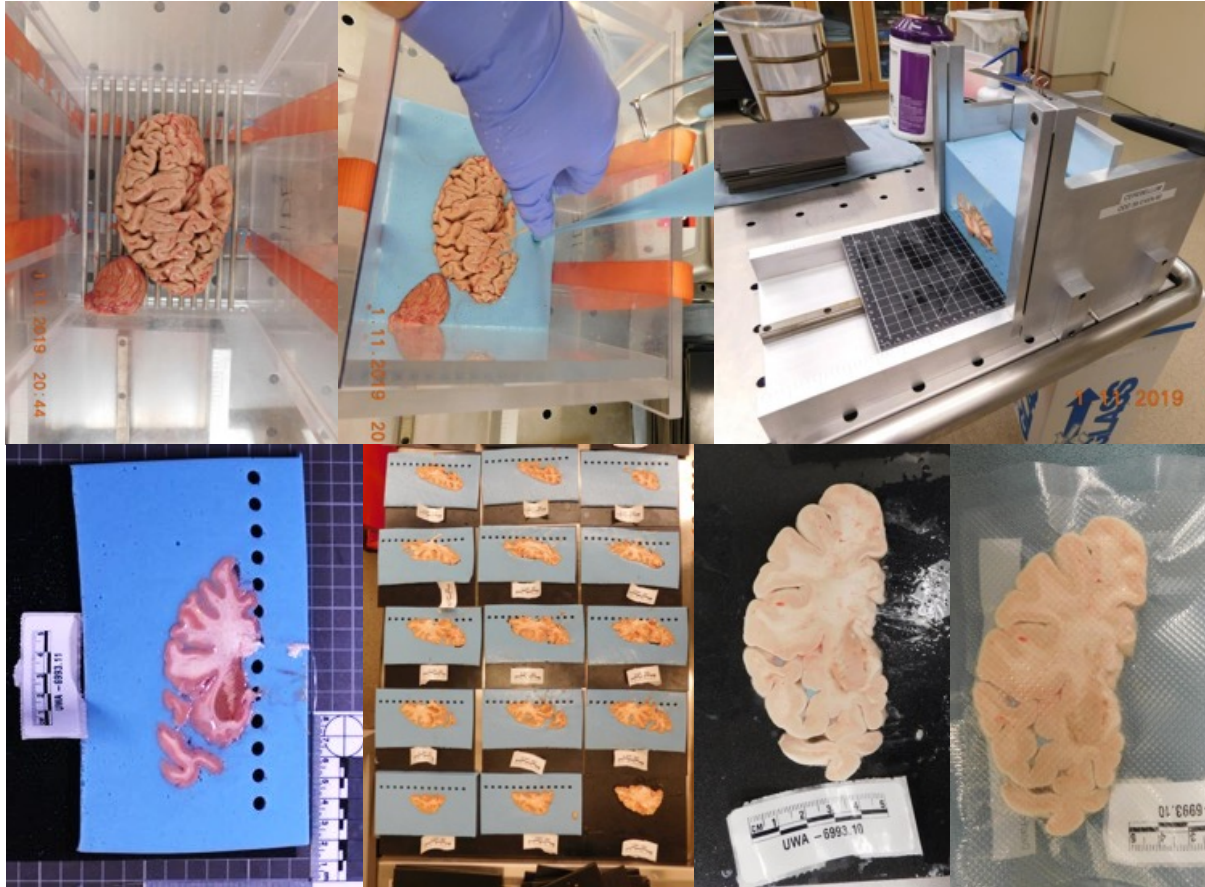


Draft Conditions Necessary In Absence of COVID-19 Diagnosis

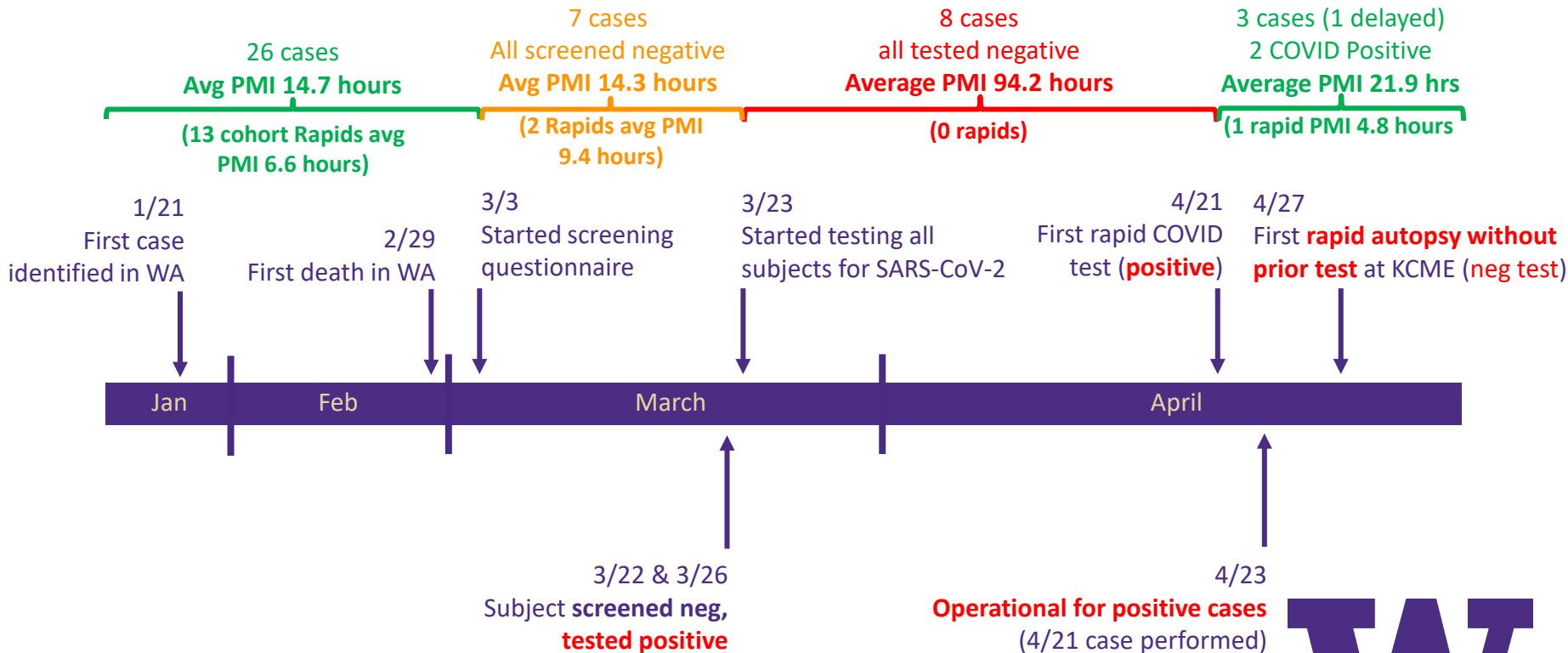
- > **Rapid SARS-CoV-2 Testing**
- > **Engineering controls**
 - Airborne infection isolation room (AIIR) with negative pressure air flow (minimum of 6 air changes per hour (ACH) or 12 ACH for renovated or new structures with air exhausted directly outside
 - HEPA/ULPA vacuum manifold, vacuum tent/shroud or equivalent intervention for oscillating saws
- > **Appropriate PPE and personnel trained to don and doff PPE**
 - PAPRs with HEPA filtered respirator (N95 alone deemed insufficient at UW during aerosolizing procedures)
 - Double surgical gloves
 - Fluid resistant/impermeable gown
 - Waterproof apron
 - Faceshield
 - Surgical scrubs
 - Boot covers.
- > **Institutional permission** to perform COVID-19-positive human tissue research (includes designation of essential research designation in Stay at Home states)
- > **Staff able** to come to worksite safely (avoid public transportation, other settings where social distancing is impossible, etc.)
- > **Staff willing**/permitted to perform brain procurement/dissection on COVID-19 positive cases
- > **SARS-CoV-2 testing** to confirm infection status (and protocols to inform studies/LNOK of results)
- > Fixation of whole brain or
- > Safety mechanisms for fresh/frozen tissue collection, storage, and distribution.
- > **Protocols for storage and distribution** of fresh/frozen tissue from SARS-CoV-2 positive donors



Specific NP Core Activities for Consideration



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Key Elements of UW NP Core Approach In COVID-19 Era

> Essential resources

- Equipment, PPE, and test reagents are always **prioritized for patient care**
- PPE are **strictly conserved** along CDC-recommended reuse, decontamination and disinfection guidelines

> Safety protocols (always vetted and approved by UW EHS)

- Buddy system for brain removals
- Isolation suite and PAPRs for all cases for brain removal
- HEPA/ULPA vacuum for aerosols due to oscillating saw
- N95 and appropriate PPE for all fresh tissue dissection
- Droplet/splash protection for fixed tissue
- SARS-CoV-2 testing on all cases
- Continue to adapt with new knowledge around COVID-19



What Does the New Normal Look Like for NP Cores?

- > Ultimately need to know risk and effectively limit it through:
 - **Widespread immunization/immunity** to SARS-CoV-2
 - **Effective therapeutic interventions** for COVID-19 infection
 - Data on risk of infectivity of autopsy procedures
- > Institutional permission to perform COVID-19-positive human tissue research
- > **Rapid SARS-CoV-2 testing** and protocols to inform studies/LNOK of results
- > Staff willing/permitted to perform brain procurement/dissection on COVID-19 positive cases
- > **Engineering controls**
 - Airborne infection isolation room (AIIR) with negative pressure air flow (minimum of 6 air changes per hour (ACH) or 12 ACH for renovated or new structures with air exhausted directly outside
 - Vacuum manifold or equivalent intervention for oscillating saws
- > **PPE availability** and appropriate use for COVID-19 positive vs. negative cases
- > **IgG/IgM testing** to identify those exposed/cleared of infection
- > Protocols for storage and distribution of frozen and fresh tissue from SARS-CoV-2 positive donors



It Takes a Village

- > Departments of Pathology and Laboratory Medicine
 - Leadership, Faculty, and Staff
- > King County Medical Examiner
- > Snohomish County Medical Examiner
- > UW Environmental Health and Safety
- > VA Puget Sound Medical Center
 - Leadership, Faculty, and Staff
- > UW Autopsy and After Death Services
- > UW ADRC
- > UW NP Core
 - Desiree Marshall, MD
 - Caitlin Latimer, MD, PhD
 - Christine Mac Donald, PhD
 - Erica Melief, PhD
 - Angela Wilson
 - Amanda Keen
 - Lisa Keene
 - Katie Kern
 - Kim Howard
 - So many others

