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ON THE MOVE: THE IMPACT OF THE COVID-19 PANDEMIC ON MOVEMENT OF CRYOPRESERVED OOCYTES AND EMBRYOS. Amelia G. Kelly, MD, Lindsey Roth, MD, Jacquelyn Shaw, MD, Caroline McCaffrey, PhD, Amanda L. Atkinson, BA, Jennifer K. Blakemore, MD, MSc NYU Langone Health, New York, NY.

OBJECTIVE: COVID-19 has influenced family building, delayed fertility care, and affected people’s decisions about where to live. We sought to understand differences in movement of cryopreserved reproductive tissue before and during the pandemic.

MATERIALS AND METHODS: This was a retrospective cohort study of patients who transported tissue into or out of a single academic fertility center in New York City (NYC). Tissue transport was compared the year before (PRE, 4/1/2019-3/31/2020) and after (DUR, 4/1/2020-3/31/2021) the height of the COVID-19 pandemic in NYC, an epicenter. The primary outcome was the number of patients transporting tissue. Secondary outcomes were the number of geographic changes, type of tissue, geographic origin/destination, and type of movement (in or out). Statistical analyses were performed using Kolmogorov-Smirnov, Wilcoxon Signed Rank Sum, Chi-Square, and Fisher’s Exact tests with p < 0.05 considered significant.

RESULTS: A total of 367 tissue transports were included, with similar rates between cohorts (PRE 46.3% (170/367) vs DUR 53.7% (197/367), p = 0.16). The median age at transport was the same (PRE 41 range 29-54) vs DUR 41 (range 28-54) years, p = 0.54. A similar amount of tissue was transported in (PRE 30.0% (517/170) vs DUR 35.0% (69/197)) and out (PRE 70.0% (119/170) vs DUR 65.0% (128/197), p = 0.32). Patients were more likely to transport embryos pre-pandemic (37.6% (64/170) oocytes vs 61.8% (105/170) embryos, PRE and oocytes during COVID-19 (51.8% (102/197) oocytes vs 44.2% (87/197) embryos, DUR) (p < 0.01). A subgroup analysis excluding tissue moved for a gestational carrier or donor gametes found a similar number of transports were due to patient geographic relocation (PRE 50.0% (61/122) vs DUR 40.5% (60/148), p = 0.12). Examination of geographic origin and destination of tissue PRE vs DUR produced no identifiable trends (p < 0.38). Timing of tissue transport varied. The monthly transport rates were relatively even PRE (average 8% per month). However, during the pandemic, there were few transports in the beginning (April-May 2020, 0-1% per month) followed by a peak of transports in June-August 2020 (11.2% per month) and after (February-March 2021 (11-16% per month) (p < 0.01). Transport activities were impacted by closure of clinics and courier service availability.

CONCLUSIONS: The rate of cryopreserved tissue movement did not differ in the year before versus during the pandemic at our center, despite being in a COVID-19 epicenter, although transport activities were concentrated into fewer days. There was peak movement of tissue three months after the pandemic onset and roughly one year from the start of the pandemic. The type of tissue transported shifted to favor oocytes during the pandemic, warranting more investigation in how COVID-19 impacted family building activities.

IMPACT STATEMENT: Despite the impact of COVID-19 on reproductive and place of living choices, the pandemic did not affect the amount of cryopreserved tissue that was relocated. However, insight into the increased movement of oocytes and potential impacts on warming outcomes or timelines is necessary.

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REPRODUCTIVE CONCERN AMONG FEMALE AND MALE UNITED STATES VETERANS EXPOSED TO ENVIRONMENTAL, CHEMICAL, AND HAZARDOUS MATERIALS. Abigail C. Mancuso, MD,1 Michelle A. Mengeling, PhD,2 Andrea Holcombe, MS, PhD,2 Ginny L. Ryan, MD, MA3 1University of Iowa Carver College of Medicine, Iowa City, IA; 2Iowa City VA Health Care System, Iowa City, IA; 3University of Washington School of Medicine, Seattle, WA.

OBJECTIVE: To assess concern among United States Veterans regarding exposures to environmental, chemical, or hazardous material and the possible impact on their reproductive health.

MATERIALS AND METHODS: A national sample of female and male US Veterans aged 20-45 completed a computer-assisted telephone interview lasting an average of 1 hour 27 minutes assessing demographics, general and reproductive health, and lifetime and military exposures. Veterans reporting exposure to at least one environmental, chemical, or hazardous material queried were included, and those reporting concern about the effect of an exposure on children they had conceived or may conceive were compared to those who reported no reproductive concerns. T-tests, Chi-square tests, and Fisher’s exact test were used to compare demographic and military characteristics between the Veterans reporting and not reporting concern.

RESULTS: Of the 1,410 women interviewed, 576 women reported at least one exposure. Of those, 141 women (24.5%) reported concern about the effect of an exposure on the children they had conceived or may conceive in the future. The top exposures women Veterans reported reproductive concern about include the anthrax vaccine (28.8%), burn pit (19.8%), chemicals such as solvents (15.8%), asbestos (12.8%), smallpox vaccine (12.7%), and prophylactic and preventative medications (12.0%). Women reporting reproductive concerns were more likely to have been deployed (p < 0.001). There was no difference in age at time of the interview or service, marital status, race, rank, education level, health insurance status, sexual orientation, or gender identity between those with and without reproductive concerns.