are needed to further investigate the implications of these data and to explore the barriers to early interventions for FPT in these patients.

**PRACTICE MANAGEMENT**

**O-163 1:50 PM Monday, October 19, 2020**

**COST-EFFECTIVENESS ANALYSIS OF THE ORIGINATOR RECOMBINANT HUMAN FOLLICLE-STIMULATING HORMONE (r-HFSH) AND URINARY HIGHLY PURIFIED MENOPAUSAL GONADOTROPIN (hMG) BASED ON DATA FROM A LARGE GERMAN REGISTRY.** Klaus F. Bühler, MD, 1 Robert Fischer, MD, 1 Edel Falla, MSc, 1 Jeroen Luyten, PhD, 2 Claudia Roeder, PhD, 2 Boyang Bian, PhD, 2 Wilma Bilger, PhD, 2 Monica Lisper, MSc, 2 Thomas M. D’Hooghe, MD, PhD 1 Department of Gynaecology, Jena-University Hospital-Friedrich Schiller University, Jena, Germany; 2 MVZ Fertility Center Hamburg GmbH, Hamburg, Germany; 1 IQVIA, London, United Kingdom; 3 Leuven (University of Leuven), Leuven, Belgium; 4 Pharma Value Consulting, Oberwil, Switzerland; 5 EMDSerono, Inc, Billerica, MA; 6 Merck Serono GmbH, Darmstadt, Germany; 7 Merck KGaA, Darmstadt, Germany; 8 Merck Healthcare KGaA, Darmstadt, Germany.

**OBJECTIVE:** Recombinant human follicle-stimulating hormone (r-hFSH) and urinary highly purified menopausal gonadotropin (hMG) are two treatment options in assisted reproductive technology (ART). We used outcomes from the real-world setting in Germany (RecDate) to compare the costs per live birth for r-hFSH and hMG.

**DESIGN:** Cost-effectiveness analysis.

**MATERIALS AND METHODS:** All women in the RecDate registry undergoing ART for the first time, receiving either r-hFSH or hMG between 2007 and 2012 were included. Total dose of FSH used, pregnancy and live birth rates (adjusted for age, body mass index, infertility type, gonadotropin usage, and urinary highly purified menopausal gonadotropin (hMG) are associated with higher cumulative live birth rates and lower total costs per patient compared with hMG after the first treatment cycle and after up to three consecutive treatment cycles (Table). The lower cost per live birth for r-hFSH indicated that r-hFSH may offer better economic efficiency than hMG.

**RESULTS:** Effective data were identified from 48,437 cycles in 28,641 women across 71 centres. r-hFSH was associated with higher cumulative live birth rates per patient compared with hMG after the first treatment cycle and after up to three consecutive treatment cycles (Table). The lower total costs for the first cycle and for up to two or three consecutive cycles in the r-hFSH group were driven by lower medication costs and better reproductive outcomes, translating into a lower cost per live birth compared with hMG for all cycles (Table).

**CONCLUSIONS:** In a large German registry (RecDate), r-hFSH was associated with higher cumulative live birth rates and lower total costs per patient compared with hMG. The lower cost per live birth for r-hFSH indicated that r-hFSH may offer better economic efficiency than hMG.

**TABLE.** Cumulative live birth rates and costs per complete treatment cycles 1–3 (fresh and frozen embryo transfers) with r-hFSH and hMG (2007–2012)

<table>
<thead>
<tr>
<th>Treatment cycle</th>
<th>Live birth (%)</th>
<th>Medication costs (€)*</th>
<th>Total costs (€)</th>
<th>Cost per live birth (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>r-hFSH</td>
<td>hMG</td>
<td>Difference</td>
<td>r-hFSH</td>
<td>hMG</td>
</tr>
<tr>
<td>Treatment cycle 1 (n=28,641)</td>
<td>24.9</td>
<td>22.4</td>
<td>2.5</td>
<td>41.7</td>
</tr>
<tr>
<td>Treatment cycle 1 and 2 (n=7,296)</td>
<td>972</td>
<td>1,072</td>
<td>-99</td>
<td>1,703</td>
</tr>
<tr>
<td>Treatment cycle 1, 2 and 3 (n=1,783)</td>
<td>9,547</td>
<td>9,579</td>
<td>-32</td>
<td>14,790</td>
</tr>
</tbody>
</table>

* Gonal-f and Menogon HP/Menopur, based on the total dose (IU) and duration of controlled ovarian stimulation. † r-hFSH/hMG acquisition, IVF preparation, oocyte retrieval, embryo transfer, pregnancy and live birth costs.

**SUPPORT:** Funding: Merck KGaA, Darmstadt, Germany

**O-164 2:05 PM Monday, October 19, 2020**

**SOCIAL MEDIA IN THE TIME OF COVID-19: AN EVALUATION OF SOCIETY FOR ASSISTED REPRODUCTIVE TECHNOLOGY (SART) MEMBER CLINICS.** Miriam Andrusier, M.F.H. 1 Seth J. Barishansky, M.D., M.S. 2 Elizabeth A. Dilday, M.D. 3 Angela K. Lawson, Ph.D. 4 Luis R. Hoyos, M.D. 5 SUNY Downstate Health Sciences University, Brooklyn, NY; 2 The George Washington University School of Medicine and Health Sciences, Washington, DC; 3 Department of Obstetrics and Gynecology, Division of Reproductive Endocrinology and Infertility, University of California, Los Angeles, Los Angeles, CA; 5 Northwestern University Feinberg School of Medicine, Department of Obstetrics and Gynecology, Division of Reproductive Endocrinology and Infertility, Chicago, IL; 6 UCLA, Los Angeles, CA.

**OBJECTIVE:** To evaluate the available COVID-19 content in regard to fertility care on the social media (SM) platforms from Society for Assisted Reproductive Technology (SART) member clinics.

**DESIGN:** Cross-sectional study.

**MATERIALS AND METHODS:** From March 17-30/2020, following the release of the first American Society for Reproductive Medicine (ASRM) COVID-19 recommendations, SART member clinics’ SM platforms including Facebook and Twitter were examined. The presence of information on COVID-19, its pregnancy implications, acknowledgement of and compliance with ASRM recommendations, mention of Centers for Disease Control and Prevention (CDC) risk mitigation strategies and local health department guidelines, as well as advertisement for telehealth and availability of mental health resources were queried. Websites were categorized by practice size (<500 vs. ≥500 cycles/year), type (academic vs. private) and degree of statewide COVID-19 burden based on CDC surveillance data (low: 0-1000; high: ≥1000 diagnosed cases). Group differences were evaluated using χ².

**RESULTS:** SM accounts were available from 84% (315/375) of SART member clinics and were more common among private compared to academic clinics [96% (274/286) vs. 46% (41/89), respectively, P<0.05]. No difference was found in the presence of COVID-19 posts when comparing private and academic clinics [80% (220/274) vs. 78% (32/41), respectively, P=0.68]. Private clinics were more likely to provide information (<500 vs. ≥500 cycles/year), type (academic vs. private) and degree of statewide COVID-19 burden based on CDC surveillance data (low: 0-1000; high: ≥1000 diagnosed cases). Group differences were evaluated using χ².

**CONCLUSIONS:** In a large German registry (RecDate), r-hFSH was associated with higher cumulative live birth rates and lower total costs per patient compared with hMG after the first treatment cycle and after up to three consecutive treatment cycles (Table). The lower cost per live birth for r-hFSH indicated that r-hFSH may offer better economic efficiency than hMG.

**TABLE.** Cumulative live birth rates and costs per complete treatment cycles 1–3 (fresh and frozen embryo transfers) with r-hFSH and hMG (2007–2012)

<table>
<thead>
<tr>
<th>Treatment cycle</th>
<th>Live birth (%)</th>
<th>Medication costs (€)*</th>
<th>Total costs (€)</th>
<th>Cost per live birth (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>r-hFSH</td>
<td>hMG</td>
<td>Difference</td>
<td>r-hFSH</td>
<td>hMG</td>
</tr>
<tr>
<td>Treatment cycle 1 (n=28,641)</td>
<td>24.9</td>
<td>22.4</td>
<td>2.5</td>
<td>41.7</td>
</tr>
<tr>
<td>Treatment cycle 1 and 2 (n=7,296)</td>
<td>972</td>
<td>1,072</td>
<td>-99</td>
<td>1,703</td>
</tr>
<tr>
<td>Treatment cycle 1, 2 and 3 (n=1,783)</td>
<td>9,547</td>
<td>9,579</td>
<td>-32</td>
<td>14,790</td>
</tr>
</tbody>
</table>

* Gonal-f and Menogon HP/Menopur, based on the total dose (IU) and duration of controlled ovarian stimulation. † r-hFSH/hMG acquisition, IVF preparation, oocyte retrieval, embryo transfer, pregnancy and live birth costs.

**SUPPORT:** Funding: Merck KGaA, Darmstadt, Germany
new-patient visits is feasible in REI practice and is especially useful in areas and it could help reduce visit times. Patients seen in person and via telemedicine patients who live further from clinics and have longer durations of infertility, out of treatment (from clinic were not significantly associated with likelihood of dropping out (<0.05). The lengths of TM appointments were significantly shorter than IP visits (mean 56.3 vs 19.49 minutes, p < 0.006). The overall character of the TW fertility social network remained constant at both time points with a broadcast “spoke and out wheel” shape. The top 5 hashtags changed from ‘family, hereditary; parents, children’ to ‘fertility, treatment; healthcare, decisions.’

CONCLUSIONS: Despite the challenge to the fertility community amidst COVID19, overall TW sentiment regarding fertility was more positive than before the pandemic. Top hashtags/word pairs changed to reflect the emergence of COVID and the unique healthcare decision making challenges faced. While the character, # of users, and total connections remained constant, unique connections and distance between users changed to reflect more self-broadcasting and less tight connections. Given no change in network structure where time at home could have led to increased social media (SM) use, further study is needed to leverage SM in these situations.

References: None

O-167 2:50 PM Monday, October 19, 2020

O-167 2:50 PM Monday, October 19, 2020

MAKING IT (NET)WORK: A SOCIAL NETWORK ANALYSIS OF “FERTILITY” ON TWITTER BEFORE AND DURING THE COVID-19 PANDEMIC. Meghan Brooke Smith, MD,1 Jennifer K. Blakemore, MD,2 Jacqueline Ho, MD MS,3 James A. Grifo, MD PhD 4University of Southern California, Los Angeles, CA; 4NYU Langone Prelude Fertility Center, New York, NY.

OBJECTIVE: To characterize activity, text sentiment, and online community characteristics regarding “fertility” on Twitter (TW) before and during the COVID-19 pandemic using social network analysis (SNA).

DESIGN: Cross sectional study.

MATERIALS AND METHODS: SNA uses graph theory to understand structure, flow, content, and relationships of networks among individuals. SNA was performed using NodeXL, a software platform that performs social network and content analysis. The search term “fertility” on TW was investigated during the weeks of February 20-27th, 2020 (Pre-COVID) and April 29th-May 6th, 2020 (during-COVID). User demographics, tweet content, and characteristics of the network were collected and analyzed during these time periods. These included: # users (vertices); edges (connections, defined as unique and total); self-loops (tweet without connection to another user); connected components (groups of users communicating back and forth frequently); maximum vertices in a connected component (largest group size); maximum and average geodesic distance (number of tweets to connect two users in the network); graph density; positive and negative sentiment tweets; top 5 hashtags; and top 5 word pairs. Statistical analyses included a z-ratio for comparison of proportions, with p <0.05 considered significant.

RESULTS: There were 1426 unique users and 401 groups in the pre-COVID data compared to 1492 unique users and 453 groups in the during-COVID data. There was no difference in the number of total connections [96.8% (1381/1426) vs 96.0% (1433/1492), p=0.25] or self-loops [20.0% (286/1426) vs 22.1% (329/1492), p=0.19] before and during the COVID-19 pandemic. The percentage of unique connections per user decreased during COVID-19 [91.6% (1381/1508) pre-COVID vs 83.3% (1433/1720) during COVID, p<0.0002]. The average and maximum distance between users in the community increased during COVID (maximum: 5 pre-COVID, 8 during-COVID; average 1.95 pre-COVID, 2.43 during-COVID). The percentage of positive sentiments per total number of tweets increased during COVID [58.1% pre-COVID (773/1331) vs 64.3% (1198/1863) during COVID, p<0.0004]. The overall character of the TW fertility social network remained constant at both time points with a broadcast “spoke and out wheel” shape. The top 5 hashtags changed during COVID to include COVID19. The top word pairs changed from “family, hereditary; parents, children” to “fertility, treatment; healthcare, decisions.”

CONCLUSIONS: Despite the challenge to the fertility community amidst COVID19, overall TW sentiment regarding fertility was more positive than before the pandemic. Top hashtags/word pairs changed to reflect the emergence of COVID and the unique healthcare decision making challenges faced. While the character, # of users, and total connections remained constant, unique connections and distance between users changed to reflect more self-broadcasting and less tight connections. Given no change in network structure where time at home could have led to increased social media (SM) use, further study is needed to leverage SM in these situations.

References: None

O-166 2:35 PM Monday, October 19, 2020

TRAVIS OF PATIENTS SEEN VIA TELEMEDICINE VERSUS IN-PERSON FOR NEW PATIENT VISITS IN A FERTILITY PRACTICE. Vinita M. Alexander, MD, Allison Schelble, MD,1 Kenan Omurtag, MD,1 Washington University in St. Louis, St. Louis, MO; Washington University School of Medicine, St. Louis, MO.

OBJECTIVE: Integration of telemedicine (TM) into reproductive endocrinology and infertility (REI) is quickly occurring due to changes in the practice environment and recently, COVID19. However, no US studies have investigated telemedicine’s impact on REI practices. This study aimed to evaluate differences in demographics, time to treatment initiation, clinical outcomes, and dropout rates between patients using telemedicine relative to in-person (IP) visits.

DESIGN: Retrospective cohort study.

MATERIALS AND METHODS: All new patients seen via TM (between June 2017 to February 2020) at an academic practice were compared with control new IP visits (seen in 2019). The following were evaluated for each new patient encounter by visit type (TM or IP): demographics, cancellation, distance to clinic, infertility diagnosis, duration of infertility, time to treatment initiation, number of clinic-contacts (i.e. number of e-messages or phone calls from patient) prior to treatment start, and dropout rate. We performed t-test analysis by group for continuous independent variables and Chi-square analyses by group for categorical independent variables. Binary logistic regression analysis was performed to estimate the odds of initiating treatment in the TM group.

RESULTS: Seventy-one patients were identified in the TM group, and 71 followed in the IP group. The average age of the IP and TM groups was similar, at 33.5 ± 5.0 and 33.2 ± 5.2, respectively (p =0.723). There were no differences between groups in the following: BMI (p =0.723), distance to clinic (p =0.255), and treatment recommendation (p =0.475). There were no differences between the TM and IP groups in: treatment dropout rates (p =0.075), cancellation rates (p =0.379), time to treatment initiation (mean 74.82 days in TM group; 77.5 days in IP group; p = 0.315), or number of times the patient contacted the clinic prior to treatment start (p =0.153). Of those who became pregnant, time to positive pregnancy was not significantly different between the TM (n=11, mean 176.4 days) and IP groups (n=19, mean 226.45 days) (p=0.368). Compared to IP patients, TM patients were significantly more likely to live further away (mean 223.6 miles vs 69.28 miles, p = 0.006) and have a longer duration of infertility (mean 41.9 months vs 19.49 months, p = 0.006). The lengths of TM appointments were significantly shorter than IP visits (mean 56.3 ± 9.1 minutes vs 59.3 ± 4.6 minutes, p < 0.001) and much less likely to contain documentation of height or weight (p=0.001). In the TM group, age and distance from clinic were not significantly associated with likelihood of dropping out of treatment (p=0.467).

CONCLUSIONS: Telemedicine appears to be of particular interest to patients who live further from clinics and have longer durations of infertility, and it could help reduce visit times. Patients seen in person and via telemedicine are equally likely to pursue treatment. Telemedicine consultation for new-patient visits is feasible in REI practice and is especially useful in areas with limited access to fertility specialists and beyond in a post-COVID landscape.