

iteratively improve our process: nurse auditors attended vFCR daily then met with our project team to review data and observations, and real-time feedback was sought from patients and caregivers.

**RESULTS:** Data collected on 1792 vFCR between April 6 and July 31, 2020 revealed 74% of nurses, physicians and trainees were satisfied or very satisfied with vFCR and 88% felt they had a good understanding of the patient care plan after vFCR. 79% of patients and caregivers were satisfied or very satisfied with vFCR and 88% of caregivers felt like a valued member of their child's care team. We met our target of 10 minutes per patient in 74% of vFCR with an average transition time of <3 minutes between patients. Patients and caregivers felt vFCR were collaborative, more private and less intimidating than in-person FCR, and some even preferred the virtual approach.

**CONCLUSION:** During this pilot, we achieved a standardized vFCR workflow that is safe, feasible, efficient and confidential, with high levels of stakeholder satisfaction and support. vFCR was highly valued by families and yielded unanticipated benefits. Based on current usage, vFCR are saving ~\$36,000 monthly in PPE. The importance of this work during the COVID-19 pandemic is clear, but also has benefits in non-pandemic times, including allowing caregivers to participate in FCR when they cannot be at the bedside, enhancing FCR confidentiality, and improving communication and care for isolated patients. Furthermore, the vFCR process is easily adaptable to other inpatient workflows such as consults and multi-disciplinary meetings. We believe this virtual care model is both highly relevant and transferable to a variety of health care settings across Canada and beyond.

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### NEW PRESENTATIONS OF ANOREXIA NERVOSA AND ATYPICAL ANOREXIA NERVOSA IN ADOLESCENTS DURING THE COVID-19 PANDEMIC

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**PRIMARY SUBJECT AREA:** Adolescent Medicine

**BACKGROUND:** The coronavirus (COVID-19) pandemic has had profound effects on adolescent mental health. Beginning in mid-March 2020, public health measures were implemented throughout the province of Quebec, including full school closure and confinement. Previous studies have demonstrated the association between stressful events and the exacerbation of anorexia nervosa (AN), however the association of the COVID-19 pandemic on new AN diagnoses remains unknown.

**OBJECTIVES:** To assess the incidence and severity of newly diagnosed AN or atypical AN (AAN) cases among adolescents during the COVID-19 pandemic compared to the five preceding years.

**DESIGN/METHODS:** We performed a retrospective analysis from Jan 1 2015 to Nov 15 2020 of new eating disorder assessments at an urban tertiary pediatric hospital. Baseline demographic information and clinical assessment variables were collected. The primary outcomes were the incidence of de novo AN or AAN diagnoses and hospitalization within 7 days of diagnosis. Event rate time trends were compared during the period of pandemic public health measures (March 2020 to November 2020) to the preceding 5-years (January 2015 to February 2020) using an interrupted time series and logistic mixed modeling.

**RESULTS:** Overall, 353 patients met inclusion criteria during the study period. Median patient age was 15.9 (IQR 13.8-16.9) years, 93% were female, and 65% of patients were diagnosed with atypical AN. For the full cohort at diagnosis, %mBMI was 92% (SD ±15%) and mean weight loss was 11 Kg (SD ±7Kg). In the 5 years preceding the pandemic, there were 4.5 new AN/AAN cases per month with a modest downward trend ( $\beta$ coeff=-0.016). During confinement, new diagnoses rose to 8.0/month with a steep upward trend ( $\beta$ coeff=1.417,  $p < 0.001$ ). Similarly, hospitalizations for new cases increased from 0.8 to 2.6/month with a significant increase in linear trend ( $\beta$ coeff -0.012 vs. 0.500,  $p < 0.001$ ). Moreover, patients diagnosed during COVID-19 confinement had a shorter duration of symptoms (6 months vs. 10 months,  $p=0.001$ ),

with a higher percentage of body weight loss (19% vs. 16%,  $p=0.03$ ) at a faster rate (2.3kg/mo vs. 1.5Kg/mo,  $p=0.001$ ). Bradycardia was more pronounced at diagnosis during the pandemic (55 bpm vs. 62 bpm,  $p=0.001$ ) with a greater proportion meeting threshold for admission (38% vs. 19%,  $p=0.001$ ).

**CONCLUSION:** During the COVID-19 confinement, new diagnoses of AN and AAN nearly doubled and hospitalizations for these patients more than tripled. Markers for disease severity were more pronounced and evolved more rapidly. Findings highlight the urgent need for increased community resources during the pandemic, as well as prospective research to understand drivers and prognosis for these patients more effectively.

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### COST ANALYSIS FOR THE RISK-STRATIFICATION OF FEBRILE INFANTS ≤ 60 DAYS OLD

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**PRIMARY SUBJECT AREA:** Emergency Medicine - Paediatric

**BACKGROUND:** Fever in the first months of life is among the most common clinical problems in pediatric healthcare. Nearly 2% of all infants will be evaluated for fever in an Emergency Department (ED) and approximately 10% harbor life-threatening serious bacterial infections (SBIs). The Rochester criteria are most widely used criteria for risk-stratification and predate modern biomarkers including procalcitonin (PCT). Recently, a high-performing prediction rule incorporating PCT was derived by the Pediatric Emergency Care Applied Research Network (PECARN). At present, PCT is not available in all clinical settings, limited largely by test cost.

**OBJECTIVES:** Compare the medical costs associated with PECARN and Rochester risk-stratification strategies using contemporary price, epidemiologic and test characteristic data.

**DESIGN/METHODS:** We assessed hospital-level costs associated with the door-to-discharge care of all well-appearing febrile infants aged ≤ 60 days evaluated at an urban tertiary pediatric hospital between April 2016 and March 2019. Direct and indirect ED and inpatient costs were obtained from provincial Ministry of Health data. Real-world costs were then incorporated into a probabilistic model for a cohort of equal size using either Rochester or PECARN risk-stratification, accounting for the added incremental cost of PCT (\$24.86CAD). Models used an 8.4% pooled SBI risk, and Sn/Sp for Rochester and PECARN of 94%/49% and 98%/63%, respectively. Modeling was calculated under 4 scenarios; true positive with hospitalization, false negative with return visit and hospitalization, false positive with hospitalization, true negative with ED discharge. All costs were calculated in Canadian dollars.

**RESULTS:** During the 3-year study period, 1168 index infant encounters met inclusion and were analyzed for hospital trajectory costs. Median costs per infant were \$323 (IQR \$286-\$393) for infants discharged from the ED with no SBI, \$2356 (IQR \$1858-\$3120) for infants hospitalized with no SBI, \$3150 (IQR \$2352-\$4201) for hospitalized infants treated for a SBI, and \$3763 (IQR \$2146-\$5180) for infants discharged from the ED ultimately requiring hospitalization with a missed SBI. For a cohort of 1168 infants, cost-per-infant using PECARN risk-stratification was \$1332 (IQR \$1062-\$1739), compared to \$1515 (IQR \$1198-\$1992) using Rochester. PECARN criteria would be expected to produce an overall savings of 12.1% for the modeled cohort (\$1,556,432 vs \$1,769,339). Under pessimistic and optimistic model assumptions, total savings were 4.9% and 18.3%, respectively. Costs borne by families were not considered, nor were the indirect benefits of reduced unnecessary invasive testing, hospitalizations and broad-spectrum antibiotic use.

**CONCLUSION:** Risk-stratification of febrile infants using PECARN prediction rules would produce important cost-savings due to superior