Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Methods: We performed indirect calorimetry during the course of disease. Extra safety measures to protect healthcare practitioners were taken. REE, Respiratory Quotient, VO_2, VCO_2 and their variability were monitored.
Results: 19 IC's were performed in 6 patients between day1 and day 26 of ventilation. Mean age: 63y (range 52-74), 5 male patients, survival 67%. Average BMI was 30.3. On average, the Energy Expenditure was 2021kcal/day or 21 kcal/kg/day.

	1	2	3	5	6	8	11	14	17	18	22	25	27	28
1		24											24	
2							20					22		
3		11						16					21	
4									16		15			
5	45	26	23	25	27	28		24						
6										43		35		31

REE in kcal/kg/day. Horizontal axis: ventilation day. Vertical axis: patient number
Conclusion: Although contra-indicated by some (2), we performed IC in COVID-19 patients and found a mean REE of 2021 kcal/day or 21 kcal/kg/day. The evolution over time showed variable findings but no 'ebb and flood phases'.
References: 1: ESPEN guideline on clinical nutrition in the intensive care unit.**Singer P et al.** Clin Nutr. 2019 Feb;38(1):48-79. 2: Nutrition Therapy in Critically Ill Patients with Coronavirus Disease (COVID-19). Martindale R et al.JPEN J Parenter Enteral Nutr. 2020 May 27:10.1002/jpen.1930.
Disclosure of Interest: None declared

LB-113

CRITICAL ENERGY AND PROTEIN DEFICITS WITH HIGH CONTRIBUTION OF NON-NUTRIENT CALORIES AFTER ONE WEEK INTO AN INTENSIVE CARE UNIT

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Rationale: Critically ill patients quickly lose 15 to 20% of skeletal muscle, in addition, their use of substrates is impaired; therefore, they need a tailored nutritional support. However, they receive commonly less than 50% of their requirements, leading to an accelerated develop of disease-related malnutrition and comorbidities. We evaluated the current nutritional adequacy of enteral nutrition in an intensive care unit.
Methods: For 7 months of 2019, we enrolled adult critically ill patient who received only enteral nutrition for ≥7 days. We assessed anthropometric parameters, nutritional risk, and electrical bioimpedance vectors at admission and after 7 days. Daily, we recorded nutritional adequacy and gastrointestinal symptoms.
Results: 132 patients were admitted, 91 did not meet the criteria, from 42 eligible patients only 26 completed LOS ≥7 days. Their average age was 44 years; the most frequent reasons for admission were trauma and neurologic pathologies with 30.7% and 26.9% of the cases respectively. Mean weight was 79.1 kg with a BMI of 27 kg/m^2; all patients were at risk of malnutrition by NRS-2002 (5.6) and by phase angle (3.96). The energy deficit was on average -674 kcal/day, with only 11.6 kcal/kg, and only 13% from protein, which deficiency was higher than -80 g/day. Lipids contributed with 42% to the energy, with 17.5% of these from propofol.
Conclusion: The critically ill patients suffered from a critical caloric/protein deficit as well as an imbalance in the supply of non-protein to protein calories, which increases the risk for complications.
References: Singer P, Blaser AR, Berger MM, et al. ESPEN guideline on clinical nutrition in the intensive care unit. Clin Nutr. 2019;38(1):48-79. Vallejo KP, Martínez CM, Matos-Adames AA, et al. Current clinical nutrition practices in critically ill patients in Latin America: a multinational observational study. Crit Care. 2017;21(1):227
Disclosure of Interest: None declared

LB-114

MUSCLE WASTING AND NUTRITIONAL STATUS IN THE CRITICALLY ILL CHILDREN: COULD POINT-OF-CARE ULTRASOUND PLAY A ROLE?

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Rationale: Currently, there is a lack of validated, objective methods for screening and assessing muscle wasting in critically ill children. The main objective of this study was to evaluate the use of ultrasound (US) as a tool to assess muscle wasting in critically ill children.
Methods: This was a single-center, prospective cohort study, including consecutive children (ages 28 d to 14 y) admitted to the PICU. Ultrasonography and anthropometrics measurements were performed at admission and then weekly until the 14th day of the PICU stay. The three moments of assessment were defined as T0 (baseline), T1 (7th day) and T2 (14th day). For analysis purposes, participants assessed only in T0 and T1 were defined as Subgroup 1, while those assessed in T0, T1 and T2 were defined as Subgroup 2.
Results: 119 patients were included in total. Median age was 12.0 months (IQR 4.0–42.5), and 60.5% were male, with 31% prevalence of under nutrition at admission by BMI–for–age. In Subgroup 1, the QFMT significantly decreased between T0 and T1 (-12.93 ±14.07%; p<0.001), and the same was observed in Subgroup 2 (-13.81 ±13.05%; p<0.001). Correlation coefficient between the two QFMT measurements was 0.997 (95% CI = 0.997 to 0.998).
Conclusion: Point-of-care US identified early muscle loss in critically ill children and can be a feasible tool in PICU setting.
References: de Souza TH, Brandão MB, Santos TM, et al. Ultrasound guidance for internal jugular vein cannulation in PICU: a randomised controlled trial. Archives of Disease in Childhood 2018;103:952-956.
McClave SA, Taylor BE, Martindale RG, Warren MM, Johnson DR, Braunschweig C, McCarthy MS, Davanos E, Rice TW, Cresci GA, Gervasio JM, Sacks GS, Roberts PR, Compher C; Society of Critical Care Medicine; American Society for Parenteral and Enteral Nutrition. Guidelines for the provision and assessment of nutrition support therapy in the adult critically Ill patient: Society of Critical Care Medicine (SCCM) and American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.). JPEN J Parenter Enteral Nutr 2016;40(2):159–211.
Disclosure of Interest: None declared.

LB-115

WEIGHT STATUS OF PATIENTS ADMITTED TO AN INTENSIVE CARE UNIT FOR MANAGEMENT OF COVID19

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Rationale: Obesity has been proposed as a risk factor for severe illness and invasive ventilation in patients with COVID19[1]. Additionally, malnutrition is highly prevalent in critically unwell patients, regardless of baseline weight status[2]. The aim of this analysis was to determine the baseline weight status and weight change in patients admitted to an intensive care unit (ICU) for management of COVID19.
Methods: Baseline weight on admission to ICU was collected from the records of all patients admitted with COVID19. Weight change during ICU admission was calculated for patients who survived and had an ICU length of stay (LOS) ≥ 5 days.

Results: Sixty four patients were admitted to the ICU for management of COVID19 (mean age 60.6yrs (range 21-90yrs), 66% male, mean ICU LOS 16.5 days (range 1-71days)). Weight status in this cohort is presented below.

Admission weight (kg, mean (range))	81.7 (45-155)
BMI (kg/m^2, mean (range))	29.6 (18.3-62.1)
Underweight BMI <18.5kg/m^2 (%)	1.75
Healthy weight BMI 18.5-24.9kg/m^2 (%)	24.5
Overweight BMI 25-29.9kg/m^2 (%)	36.8
Obese BMI>30kg/m^2 (%)	36.8

69% of patients experienced at least 5% weight loss during ICU admission and 31% had greater than 10% weight loss, despite provision of nutrition support.
Conclusion: Overweight and obesity were prevalent in patients admitted to our ICU for management of COVID19. Significant weight loss in this cohort confirms that malnutrition and obesity co-exist in critically unwell patients. These findings are consistent with emerging data from other centres internationally[3] and inform appropriate nutritional management of this cohort of critically ill patients.
References: [1]Simonnet et al. *Obesity* (2020) 28: 1195-1199, [2]Lew et al. *JPEN* (2017) 41(5):744–58, [3]House et al., ICNARC 2020.
Disclosure of Interest: None declared.

LB-116

PREVALENCE, RISK FACTORS AND CLINICAL IMPLICATIONS OF HYPOPHOSPHATEMIA IN CRITICALLY ILL CHILDREN ON ORAL AND ENTERAL NUTRITION

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Rationale: Hypophosphatemia events frequently occurs in pediatric intensive care units (PICU) and is related to comorbidities such as sepsis, malnutrition and risk of mortality. These events are poorly described in oral and enteral nutrition. The aim of this study is evaluate the incidence of hypophosphatemia in critically ill pediatric patients under baseline serum without phosphate, in oral and/or enteral nutrition and investigate possible relationship with nutritional and inflammatory status.
Methods: Prospective, observational cohort study, conducted between March 2017 and July 2018 at a PICU of a tertiary hospital. Participants aged 28 days to 14 years were included. The anthropometric assessment (weight and height) and the laboratory assessment (CRP and phosphorus) were performed up to 72 hours after admission and repeated after 7 days for three consecutive times, totaling 28 days of hospitalization. During hospitalization, a caloric (Kcal), protein (PTN), calcium (Ca), phosphorus (P) and vitamin D (Vit − D) intake per day were recorded.
Results: 112 participants were included in the study. Hypophosphatemia events varied from 27.2% − 37.5% between periods. A CRP as an inflammatory marker occurred in all intervals, ranging from 65 to 80%. The median intake of PTN, Ca, P and Vit D did not reach as current recommendations throughout the study. The inflammatory state was associated with hypophosphatemia (p-valor = 0,003).
Conclusion: Hypophosphatemia is frequent in critically ill pediatric patients, even if they are not under parenteral nutrition. It is necessary to monitor phosphorus levels and think about the possibility of an early replacement.
References: Leite HP, Pinheiro Nogueira LA, Teodosio AHC. Incidence and Clinical Outcome of Hypophosphatemia in Pediatric Burn Patients. J Burn Care Res. 2017;38(2):78–84.
Mehta NM, Skillman HE, Irving SY, Coss-Bu JA, Vermilyea S, Farrington EA, et al. Guidelines for the Provision and Assessment of Nutrition Support Therapy in the Pediatric Critically Ill Patient: Society of Critical Care Medicine and American Society for Parenteral and Enteral Nutrition. JPEN J Parenter Enteral Nutr. 2017 Jul;41(5):706–42.
Disclosure of Interest: None declared

LB-117

ANALYSIS OF NUTRITION SUPPORT IN COVID19 CRITICAL CARE PATIENTS

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Rationale: The aim of this analysis was to determine route and adequacy of nutrition support in patients with COVID19 during the first 7 days of admission to an intensive care unit (ICU).
Methods: Nutrition parameters were collected for all patients admitted to ICU with COVID19 and compared to best practice guidelines[1].
Results: Of the initial 64 patients admitted to ICU for management of COVID19, all patients were assessed by a critical care dietitian. Patients who were tolerating oral diet were commenced on oral nutrition support as appropriate. Forty eight patients (75%) required enteral nutrition (EN) or parenteral nutrition (PN). The feeding route of choice for the majority of patients was EN (89.5%). In patients with gastrointestinal (GI) intolerance where strategies to optimise tolerance were unsuccessful, supplementary or total PN was used (10.5%). Energy and protein intakes during the early and late acute phase are described below.

	Target nutrition provision[1]	Energy (% requirements met)	Protein (% requirements met)
Early acute phaseDay 0-3[1]	≤70% estimated requirements	69.8 (27.2)	44.2 (23.8)
Late acute phaseDay 4-7[1]	100% estimated requirements	81.5 (25.4)	67.8 (28.4)

The most common reason for suboptimal nutrition intake in the late acute phase was GI intolerance, affecting 27% of patients. Compared with those without GI intolerance, patients who experienced feed regurgitation, vomiting or high gastric residual volumes achieved significantly less energy and protein intakes ($p \leq 0.05$). Proned position did not affect GI tolerance in our cohort ($p=0.65$).
Conclusion: Energy intakes in the early acute phase were consistent with best practice guidelines while protein provision was a challenge in both phases. GI intolerance was common which compromised nutrition intakes, though proned position did not affect these outcomes. Where strategies to improve GI tolerance are unsuccessful supplementary PN should be considered without delay to optimise nutrition intake.
References: [1]Singer et al. *Clinical Nutrition* (2019) 38(1), 48-79.
Disclosure of Interest: None declared.

LB-118

NUTRITIONAL TREATMENT IN CRITICALLY ILL PATIENTS WITH COVID-19 DISEASE: SPANISH EXPERIENCE IN A NNIVERSITY HOSPITAL (EXTENDED)

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Rationale: Patients with COVID-19 disease develop respiratory insufficiency, 5% of which needs ICU treatment. Describe the experience of a tertiary hospital in the nutrition treatment during this pandemic.
Methods: Retrospective study including COVID-19 patients from 5 ICU units of our hospital that needed medical nutrition treatment (MNT). Collected variables: sex, age, BMI, underlying diseases, time from hospitalisation to ICU admission, type of respiratory support, caloric and protein requirements (25 kcal/kg adjusted body weight(ABW), 1.3 g/kg ABW/day), MNT type (enteral nutrition (EN), parenteral nutrition (PN), mixed EN+PN), total calories (including propofol) and proteins administered,