COVID-19 and obesity: Emerging insights and policy implications

Friday 29 May 2020
Housekeeping

• Please use the Q&A function to post comments and questions
• There will be a chance to ask questions after each speaker
• The recording, slides and certificate of attendance will be circulated post-webinar
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Meet the speakers

Prof John Wilding, UK
Dr Ximena Ramos Salas, Canada
Dr Francesco Branca
Prof Karine Clément, France
Dr Ricardo Luna, Mexico

www.worldobesity.org
Integrating obesity into global NCD and COVID-19 responses

Prof John Wilding, University of Liverpool & President-Elect, World Obesity Federation, UK
Integrating obesity into global NCD and COVID-19 responses

• Over 5.5 million documented infections worldwide
• > 350,000 deaths
• All countries affected

• Obesity is not a risk factor for SARS-COV-2 infection
• People with obesity are more likely to develop severe COVID-19 disease, require intensive care treatment and die
Adjusted effects of obesity and related diseases on COVID mortality


https://doi.org/10.1101/2020.05.06.20092999
Mechanisms linking obesity to COVID-19 severity

Sattar et al
Potential adverse effects of the pandemic response for people with obesity

- **Effects of ‘lockdowns’**: isolation / stigma, reduced physical activity, comfort eating and snacking - risk of ‘COVID’ weight gain
- **Economic effects**: loss of income, food poverty (increased processed foods, snacking)
- **Reduced access to healthcare**: obesity treatments, other investigations and treatments – may disproportionally affect those with obesity
How should we embed thinking about obesity into the pandemic response?

- **Diet:** Ensuring adequate nutrition for all, focus on the most vulnerable, reduce reliance on highly processed foods

- **Activity:** outdoors better than indoors (less virus transmission), encourage and promote walking and cycling

- **Prevention and Treatment:** Public health messaging about obesity and COVID severity. Provide access to accurate and reliable advice. Continue to provide (remote) support, restart treatment services as soon as possible
WOF response to COVID-19

**Advocacy**
WHO NCD Civil Society Working Group; advocacy on Obesity as a Risk factor and disease
Expert Statements, including at WHA last week

**Convening**
Webinars and topic-specific engagement

**Education and Capacity Building**
SCOPE to include more on COVID
Increased numbers of certifications

**Evidence and Data**
Observatory a critical resource
Global Obesity Economics Think Tank
ROOTS Declaration – 550 sign ups in 4 days

R ecognise officially that obesity is a chronic, multifactorial disease as well as a driver of other diseases, with serious implications for individuals, families, societies and economies.

O besity monitoring and surveillance, and innovative research into the causes and effective strategies for preventing and treating obesity, must be vigorously promoted and supported.

O besity prevention strategies must be developed, tested and implemented across the life course, from pre-conception, through childhood, and into older age.

T reatment of obesity, using evidence-based, dignified, non-stigmatising and person-centred approaches – including behavioural, pharmacological, digital, nutritional, physical-activity based and surgical interventions – should be accessible to all people with obesity.

S ystems-based approaches should be applied to the management of obesity, aimed at strengthening health systems, enabling obesity’s incorporation into primary and secondary care, and addressing the environmental, social and commercial roots of obesity.
COVID-19 and obesity – what does the latest data tell us?

Ximena Ramos Salas PhD, Director of Research and Policy, Obesity Canada, Canada
COVID-19 & Obesity

**Key Points**

- Obesity is a chronic disease characterized by abnormal or excessive adiposity which impairs health (1)

- Obesity may be a risk for developing more severe COVID-19 complications, requiring hospitalization and critical care (2-5)

- Obesity, chronic kidney disease, and liver disease may be associated with increased hospital mortality (6)

- Although studies associate BMI with increased risk for disease severity and mortality, BMI is not a sufficient diagnostic tool for obesity (at the individual level) (7); Future obesity and COVID studies should be based on clinical parameters of obesity that go beyond BMI

- Parameters mediating risk between obesity and COVID-19 may include pathophysiological aspects of obesity, inflammatory and metabolic factors, respiratory mechanics, and other obesity related comorbidities (7-9)

- Other mediating parameters may include: social determinants of health (including poverty, physical environment, ethnicity), quality of care and timely access to care in hospital related, co-morbidities, weight bias and obesity stigma (10-13)
Presenting symptoms and comorbidities in patients in hospital with coronavirus disease 2019 (covid-19).

- Prospective cohort, study n = 20,133 patients with coronavirus disease (England, Scotland and Whales, UK)

- Study outcomes: critical care admission and mortality in hospital or palliative discharge

- The prevalence of obesity in this study (11%) was considerably lower than the overall UK prevalence (29%).
  - Elderly male
  - Misclassification
  - Under reporting
Multivariable Cox proportional hazards model (age, sex, and major comorbidities), where hazard is death.

- Age, gender, obesity and underlying illness have emerged as risk factors for severe covid-19
- Obesity, chronic kidney disease, and liver disease were also associated with increased hospital mortality
• Prospective cohort study, NYC, USA, n = 257; adults who were diagnosed with laboratory-confirmed COVID-19 and were critically ill with acute hypoxaemic respiratory failure.

• Primary outcome was the rate of in-hospital death

• Critically ill patients had the median age of 62 years and were comprised of 67% men

• At least one chronic illness was reported in 212 (82%) patients, the most common of which were hypertension (162 [63%]) and diabetes (92 [36%]).

• 46% of critically ill patients had obesity; obesity was more common in this adult patient population than in the general New York City adult population (where prevalence of obesity is 22%)

• Independent associations between biomarkers for inflammation (IL-6) and thrombosis (D-dimer) and in-hospital mortality

• Severe obesity (BMI ≥40) was not identified as an independent risk factor for mortality

• Studies are needed to identify the mechanisms that mediate the association of obesity with susceptibility to or severity of COVID-19

• High incidence of critical illness among racial and ethnic minorities

Weight Bias, Obesity Stigma and COVID-19

CALL TO ACTION

Obesity Canada
Obesity Action Coalition, USA
European Coalition for People living with Obesity
Riksförbundet HOBS – Hälsa oberoende av storlek, Sweden
Obesity UK
Obesity Medicine Association, USA
The Obesity Society, USA
European Association for the Study of Obesity
Montreal Behavioural Medicine Centre, Canada
International Behavioural Trials Network, Canada
Canadian Association of Health Behaviour Change and Promotion

Canadian Psychiatric Association
Canadian Society of Endocrinology and Metabolism
Health Psychology Section, Canadian Psychological Association
World Obesity Federation
Behavioural Medicine Section of the Canadian Psychological Association
Heart and Stroke Foundation of Canada
Canadian Association of Bariatric Physicians and Surgeons
Diabetes Canada
Canadian Association of Cardiovascular Prevention and Rehabilitation

Implications for Research and Policy

Research

• Impact of social determinants of health, weight bias and obesity stigma on level of COVID-19 testing, treatment and care
• Implications of obesity for COVID-19 disease morbidity and mortality
• Impact of the COVID-19 pandemic on obesity prevalence and complications
• Impact of COVID-related health care system strain (e.g. deferring of non-urgent procedures) on obesity treatment
• Surveillance must go beyond BMI (e.g., metabolic and inflammatory factors, pre-existing health conditions and/or disease states, quality of life, socioeconomic status, quality of care and timely access to care in hospital, etc.)

Policy

• Future COVID-19 responses should reflect emerging evidence about obesity as a potential risk factor for COVID-19 complications, critical illness, hospitalization, and mortality
• Policy interventions need to respond to the intersection between social determinants of health, vulnerability to infectious disease pandemics, obesity and stigma
• Importance of forward planning and preparedness studies for future waves of coronavirus
WHO response

Dr Francesco Branca, Director, Nutrition and Food Safety, World Health Organisation (WHO)
WHO response to covid-19

- Coordination and monitoring of country preparedness and response
- Epidemiological analysis and risk assessment
- Risk communication and community engagement
- Coordinated global supply chain management
- Technical expertise and health emergency workforce
- Accelerating research, innovation, and knowledge sharing
- Strengthening pandemic preparedness for the future

Data as of 27 May 2020:

- Total Received: US$651.8m (37.8%)
- Gap: US$840.6m (48.7%)
- Total Pledges: US$132.5m (10.5%)
Providing guidance

- Physical activity during quarantine
- Nutrition advice for adults
- Feeding babies and young children
- Breastfeeding advice
- Essential Maternal, Newborn and Child Health Services
Communication campaigns

#HealthyAtHome: Healthy Diet

#HealthyAtHome - Physical activity
Social media

NUTRITION TIPS

- STAY HYDRATED
  Drink plenty of WATER
  #HEALTHYATHOME

NUTRITION TIPS

- REDUCE SUGARS CONSUMPTION
  Limit intake of sweets and sugary drinks
  #HEALTHYATHOME

NUTRITION TIPS

- AVOID DRINKING ALCOHOL
  or keep it to the MINIMUM if you drink
  #HEALTHYATHOME

Be active at home during #COVID19 outbreak

1. Try exercise classes online
2. Dance to music
3. Play active video games
4. Try skipping rope
5. Do some muscle strength & balance training

BE ACTIVE & STAY HEALTHY AT HOME!

Doing any activity around the home is better than none at all. Be active during #COVID19 outbreak to maintain your heart health, muscle strength and flexibility. It is good for your mental health too!

If you are at home during #COVID19 outbreak

WHO recommends that all healthy adults do 30 minutes/day of physical activity, and children should be physically active for 1 hour/day

WORLD OBESEITY

www.worldobesity.org
20 March: During this difficult time, it’s important to continue looking after your physical and mental health. This will not only help you in the long-term, it will also help you fight COVID-19 if you get it. **First, eat a healthy and nutritious diet, which helps your immune system to function properly.** Second, limit your alcohol consumption, and avoid sugary drinks. Third, don’t smoke. Smoking can increase your risk of developing severe disease if you become infected with COVID-19. Fourth, exercise. WHO recommends 30 minutes of physical activity a day for adults, and one hour a day for children. If your local or national guidelines allow it, go outside for a walk, a run or a ride, and keep a safe distance from others. If you can’t leave the house, find an exercise video online, dance to music, do some yoga, or walk up and down the stairs.
OP7.5 Maintain the continued functioning of the health system in all relevant aspects, in accordance with national context and priorities, necessary for an effective public health response to the COVID-19 pandemic and other ongoing epidemics, and the uninterrupted and safe provision of population and individual level services, for, among others, communicable diseases, including by undisrupted vaccination programmes, neglected tropical diseases, noncommunicable diseases, mental health, mother and child health and sexual and reproductive health and promote improved nutrition for women and children, recognizing in this regard the importance of increased domestic financing and development assistance where needed in the context of achieving UHC;
1. protect nature, which is the source of the air, water and food on which human health depends.
2. ensure that homes and health facilities have water and sanitation, access to clean and reliable energy, and are resilient to climate change.
3. invest in a quick transition to clean energy that will cut air pollution, so that when COVID-19 has been defeated people can breathe clean air.
4. promote healthy and sustainable food systems, to give people access to healthy and affordable food.
5. build cities that integrate health into all aspects of urban planning, from sustainable transport systems to healthy housing.
6. stop subsidizing fossil fuels that cause pollution and drive climate change.
Action on obesity

- Guidelines on healthy diet
- Guidelines on food environment & tools
- Guideline on appropriate complementary feeding for optimal child growth and development
- Recommendations on the management of overweight and obesity in children and adolescents
- ECHO implementation: action networks
- Joint program with UNICEF - marketing
- Data: expanding COSI
Covid-19: A lever for the recognition of the obesity as a disease? A French example

Prof Karine Clément, Professor of Nutrition
Pitié Salpêtrière Hospital, Sorbonne Université, INSERM, Paris & French Association for the Study of Obesity, France
A network organization of obesity care management and clinical research

• FORCE : French clinical research network on obesity (2014 – 2024)
  • Coordination : Profs M. Laville, K. Clément and D. Langin
  • Operational coordination : Dr M. Alligier

• 37 Specialized Obesity Centers
  • Multidisciplinary approach : surgeons, psychologists, pediatrician, dietitians …
  • Involved in the French « National Obesity Plan »
  • New Governmental obesity Road Map (October 2019)
  • Coordination : Prof O. Ziegler and local center coordinators

• French Association for the Study of Obesity (AFERO)
  • President : Dr M Coupaye

=> An alliance for COVID-19 crisis : Warning on April 3, 2020 to the Ministry of Health
Warnings based on … ?

- Literature Survey (knowledge from other virus)\(^1,2\)
- Feed-backs from ICUs (France)
- UK experience: NHS Survey (40% of patients with obesity in ICUs) March 20
- French newspaper “Le Monde” April 7\(^{th}\)
- First publication April 7\(^{th}\) from French group in Lille\(^2\): Severe obesity increases the risk of invasive mechanical ventilation in intensive care, regardless of age, sex and diabetes

=> The High Council of Public health (March 31\(^{st}\)): BMI threshold defining the risk to have a severe Covid-19 was from 40 kg/m\(^2\) (referring to H1N1 pandemy)

Nature of the warning to health authorities

- Preventive measures & need for information (avoid panic) incl. post bariatric surgery
- Multidisciplinary follow-up during lock-down (doctors, dietetician, psychologist) by telemedicine, work stoppage if necessary
- Facilitation to virus screening access
- Health inequalities for prevention and care linked to socio-economic status.
- Persons with COVID-19, good practices in the acute and medium term (remote monitoring)
- Limit the potential double stigma Obesity + COVID-19

the « answers…

- Obesity (BMI > 30) recognized as a risk of severe form (High Council of Public Health)- April 20th
- “Care sheet for people in a situation of obesity during the Covid-19 epidemic” (High Authority for Health)***
- National hot line with psychologists (not expert in obesity), no answers regarding dieticians and multidisciplinary follow-up (issue with cost reimbursement)
- *** documents for patients, guidelines for practionners and 5 Newsletters from FORCE/ AFERO/CSO alliance
- *** Role of patient associations (incl. media dissemination)
Current situation (May 2020)

Scientific side$^{1,2}$:

• Severe COVID-19 vs. non-critical: higher in patients with obesity vs those without (adj. ORs: 1.80 - 2.03)$^1$

• Diabetes survey (Coronado): BMI as a major risk factor (ICUs/death) not HBA1c or treatments$^2$

• In link with other International reports

Political side

• Reactivate Obesity Roadmap

• Pursue action of the CSO/FORCE/AFERO alliance

• Need support for multidisciplinary care for obesity care and therapeutic education programs (local ambulatory care facilities-, telemedicine)

• Fund for research action in obesity

Mexican national policy

Dr Ricardo Luna,
President, Mexican Society of Obesity (SMO) & Member of the World Obesity’s Clinical Care Committee, Mexico
Mexico´s Health Situation Before COVID-19

- Mexico has a population with high rates of chronic diseases.
- According to the last national health and nutrition survey, the percentage of adults with overweight or obesity is 75.2%.
- This obesity epidemic is a driver of other chronic diseases, such as diabetes, hypertension, COPD, and kidney diseases.
- Half of the population in Mexico is less than 27 years of age.
Mexican Strategies Relate Obesity and COVID-19

• Mexico provides training to physicians for correctly filling out COVID-19 related death certificates

• Death certificates must indicate comorbidities that may have contributed to the death such as obesity and other diseases

• The Mexican Government identifies that not only the elderly are a high-risk group, but also people with obesity
How did Mexico identify obesity as a risk factor for COVID-19 early on?

- At the beginning of the pandemic for COVID-19, there was insufficient evidence to define high risk groups.

- Other countries suggested that COVID-19 is more likely to infect older male adults with chronic diseases as a result of their weaker immune functions.

- Mexico assumed obesity as a risk factor based on evidence related to influenza virus, and published early guidelines where obesity is suggested as a major risk factor for COVID-19 complications.
How Mexico established obesity as a risk factor for COVID-19?

• Young adults with COVID-19 complications were correlated with obesity, diabetes and cardiovascular diseases

• Mexico has a large young population with obesity, this takes them to higher levels of COVID-19 complications

• This is the reason why Mexico established obesity as a risk factor, regardless of age
Questions?
Final remarks

Prof John Wilding, UK
Dr Ximena Ramos Salas, Canada
Dr Francesco Branca
Prof Karine Clément, France
Dr Ricardo Luna, Mexico
Learn more:

Next week World Obesity will be publishing a dossier on COVID-19 and obesity, a comprehensive compilation of global evidence, guidelines, case studies, FAQs, statements and other resources related to covid and obesity.

World Obesity Live will cover a range of issues related to obesity and COVID-19. The next webinar will take place on Friday 12 June 2020

COVID-19 Resources
World Obesity Federation https://www.worldobesity.org/resources/resource-library/covid-19-obesity-resources
Obesity Canada https://obesitycanada.ca/covid-19/

SCOPE E-Learning, offering numerous free e-learning modules on specific issues around obesity for Health Care Physicians (HCPs)
Thank you!

Please complete our feedback form.

If you have any queries please contact Hannah Brinsden at hbrinsden@worldobesity.org