

EVIDENCE SEARCH REPORT

RESEARCH QUESTION:	What are the predictors of mortality in COVID-19 patients?	UNIQUE IDENTIFIER:	CC120402-01 ESR
CONTEXT:	Relates to CC120301-01 (surge capacity and quality of care). Focus on hospital/acute/ICU/CCU settings and adult populations. Consider only medical predictors such as co-morbidities, caregiver-patient ratios (avoid social/environmental). (see review CAC061801 for pediatric mortality/triage).		
RESOURCES USED:	<ul style="list-style-type: none"> • CDC database • Google Scholar • LitCovid • MEDLINE • MedRxiv • Embase • PHAC website • PubMed • WHO Global Research • Evidence Synthesis Ontario • COVID-19 Evidence Alerts, McMaster Plus • Our World in Data, Coronavirus • Mathematica.org • Johns Hopkins, Bloomberg School of Public Health • National Collaborating Centre for Methods and Tools • Canadian Critical Care Society • Society of Critical Care Medicine • European Federation of Critical Care Nursing Associations • Intensive Care Society • European Society of Intensive Care Medicine • Australian and New Zealand Intensive Care Society • Intensive Care Society of Ireland • Scottish Intensive Care Society • Welsh Intensive Care Society (Cymdeithas Gofal Dwys Cymru) • National Health Library & Knowledge Service (Ireland) • SPOR Evidence Alliance 		
LIMITS/EXCLUSIONS/INCLUSIONS:	English	REFERENCE INTERVIEW COMPLETED:	December 3, 2020
DATE:	December 8, 2020		
LIBRARIAN:	Lukas Miller Brianna Howell-Spooner	REQUESTOR:	Dr. Sabira Valiani
TEAM:	CRITICAL CARE		
SEARCH ALERTS CREATED:	Y/N (MEDLINE, ETC.) N		
CITE AS: Miller, L; Howell-Spooner, B. What are the predictors of mortality in COVID-19 patients? 2020 Dec 8; Document no.: CC120402-01 ESR. In: COVID-19 Rapid Evidence Reviews [Internet]. SK: SK COVID Evidence Support Team, c2020. 23 p. (CEST evidence search report)			

LIBRARIAN NOTES/COMMENTS

Hello,

This search produced in a high volume of results, totaling 234 references from databases. Only a few relevant grey literature sources and findings were available.

DISCLAIMER

This information is provided as a service by the Saskatchewan Health Authority and University of Saskatchewan Libraries. Professional librarians conduct searches of the literature. Results are subject to the limitations of the databases and the specificity, broadness and appropriateness of the search parameters presented by the requester. The Libraries do not represent in any matter that retrieved citations are complete, accurate or otherwise to be relied upon. The search results are only valid as of the date and time at which the search is conducted. The Libraries do not accept responsibility for any loss or damage arising from the use of, or reliance on, search results.

The literature ranges from studies of particular and specific co-morbidities and biomarkers for mortality, to general population predictive models and simulations, and a handful of reviews and larger epidemiological studies aiming to shed light on policies and best practice.

Please see the attached/included .RIS file to use with a reference manager (e.g. EndNote) to browse the full list of journal articles; the list below includes only titles and abstracts.

Yours,

Lukas

SEARCH RESULTS

To obtain full-text articles email library@saskhealthauthority.ca.

SUMMARIES, GUIDELINES & OTHER RESOURCES

Guidance

William Osler Health, COVID Critical Care. Prognostication. [2020, April 7].

<https://covidcriticalcare.ca/prognostication/>

Summaries

National Health Library & Knowledge Service (Ireland).

In Patients with COVID-19, What Patient Characteristics Will Suggest Development of Severe Disease. [2020, April]. <https://hselibrary.ie/in-patients-with-covid-19-what-patient-characteristics-will-suggest-development-of-severe-disease/>

Do People with Type 1 and Type 2 Diabetes Carry the Same Risk of Poorer Outcomes from COVID-19?. [2020, June]. <https://hselibrary.ie/do-people-with-type-1-and-type-2-diabetes-carry-the-same-risk-of-poorer-outcomes-from-covid-19/>

What is the Risk of a Person with Obesity Contracting COVID-19 Compared to Someone without Obesity? What is the Risk of a Person with Obesity Developing Severe Illness from COVID-19? How is Severe Illness Defined for People with COVID-19 Who Are Obese? Do People with Obesity Have a Higher Mortality from COVID-19? How Does Obesity Affect Children with COVID-19? Rehabilitation Post-COVID-19 for Obese Patients?. [2020, June]. <https://hselibrary.ie/what-is-the-risk-of-a-person-with-obesity-contracting-covid-19-compared-to-someone-without-obesity-what-is-the-risk-of-a-person-with-obesity-developing-severe-illness-from-covid-19-how-is-severe-ill/>

What Are the Outcomes for People with Cystic Fibrosis Who Contract COVID-19? [2020, September]. <https://hselibrary.ie/what-are-the-outcomes-for-people-with-cystic-fibrosis-who-contract-covid-19/>

What is the Evidence on Additional Risk for People >65 with Cardiovascular Disease? [2020, September]. <https://hselibrary.ie/what-is-the-evidence-on-additional-risk-for-people-65-with-cardiovascular-disease/>

Data

Our World in Data. Risk Factors for the Coronavirus Disease. [2020].

<https://ourworldindata.org/coronavirus#risk-factors-for-the-coronavirus-disease>

ARTICLES

Note: References are sorted by year (newest to oldest)

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<https://www.ncbi.nlm.nih.gov/pubmed/33063540>

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10.2196/20259 URL: <https://www.ncbi.nlm.nih.gov/pubmed/32735549>

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<https://www.ncbi.nlm.nih.gov/pubmed/32933191>

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SEARCH STRATEGIES

Ovid MEDLINE(R) ALL <1946 to December 08, 2020>

#	Searches	Results
1	(coronavirus/or betacoronavirus/or coronavirus infections/) and (disease outbreaks/or epidemics/ or pandemics/)	39561
2	(nCoV* or 2019nCoV or 19nCoV or COVID19* or COVID or SARS-COV-2 or SARSCOV-2 or SARSCOV2	81289

	or Severe Acute Respiratory Syndrome Coronavirus 2 or Severe Acute Respiratory Syndrome Corona Virus 2).ti,ab,kf,nm,ox,rx,px.	
3	((new or novel or "19" or "2019" or Wuhan or Hubei or China or Chinese) adj3 (coronavirus* or corona virus* or betacoronavirus* or CoV or HCoV)).ti,ab,kf.	26960
4	((coronavirus* or corona virus* or betacoronavirus*) adj3 (pandemic* or epidemic* or outbreak* or crisis)).ti,ab,kf.	5353
5	((Wuhan or Hubei) adj5 pneumonia).ti,ab,kf.	283
6	or/1-5	83983
7	limit 6 to yr="2019-Current"	82521
8	hospital mortality/	41126
9	((hospital or in-hospital or in-hospital or inpatient? or inhouse or in-house or clinic* or intensive care or critical care or ICU or CCU or critical* ill*) adj2 mortalit*).tw,kf.	51492
10	risk factors/ and (inpatients/ or exp hospitals/ or exp hospitalization/)	48703
11	((risk adj2 (estimat* or predict* or prognos* or forecast or factor? or mortality or death or fatal* or case fatal* or casual* or lethal*)) and (hospital or in-hospital or in-hospital or inpatient? or inhouse or in-house or clinic* or intensive care or critical care or ICU or CCU or critical* ill*)).tw,kf.	288016
12	or/8-11	373640
13	(predict* adj3 mortalit*).ti,ab,kf,kw,hw.	37468
14	((forecast* or prognos*) adj2 mortalit*).ti,ab,kf,kw,hw.	3122
15	13 or 14	39834
16	7 and 12 and 15	232
17	remove duplicates from 16	224
18	from 17 keep 2, 4-12, 14-15, 17-20, 22-23, 25-28...	155

Embase <1980 to 2020 Week 49>

#	Searches	Results
1	sars-related coronavirus/	466
2	(coronavirinae/ or betacoronavirus/ or coronavirus infection/) and (epidemic/ or pandemic/)	11187
3	(nCoV* or 2019nCoV or 19nCoV or COVID19* or COVID or SARS-COV-2 or SARSCOV-2 or SARS-COV2 or SARSCOV2 or Severe Acute Respiratory Syndrome Coronavirus 2 or Severe Acute Respiratory Syndrome Corona Virus 2).ti,ab,kw,hw,ot.	74820
4	((new or novel or "19" or "2019" or Wuhan or Hubei or China or Chinese) adj3 (coronavirus* or corona virus* or betacoronavirus* or CoV or HCoV)).ti,ab,kw,hw,ot.	70908
5	((coronavirus* or corona virus* or betacoronavirus*) adj3 (pandemic* or epidemic* or outbreak* or crisis)).ti,ab,kw,ot.	4873
6	((Wuhan or Hubei) adj5 pneumonia).ti,ab,kw,ot.	328
7	or/1-6	81422
8	limit 7 to yr="2019-Current"	80098
9	hospital mortality/	33992
10	((hospital or in-hospital or in-hospital or inpatient? or inhouse or in-house or clinic* or intensive care or critical care or ICU or CCU or critical* ill*) adj2 mortalit*).tw,kw.	86958
11	((risk adj2 (estimat* or predict* or prognos* or forecast or factor? or mortality or death or fatal* or case fatal* or casual* or lethal*)) and (hospital or in-hospital or in-hospital or inpatient? or inhouse or in-house or clinic* or intensive care or critical care or ICU or CCU or critical* ill*)).ti,kw,hw.	630128
12	or/9-11	710145
13	(predict* adj3 mortalit*).ti,ab,kw,hw.	62483
14	((forecast* or prognos*) adj2 mortalit*).ti,ab,kw,hw.	2496
15	13 or 14	64422
16	8 and 12 and 15	215
17	limit 16 to medline	60
18	16 not 17	155