



Agenda
Village of Nampa
Council Meeting
February 16, 2021
Village of Nampa Council Chambers
7:00 p.m.

1. Call the meeting to order

2. Adoption of the agenda

3. Adoption of Previous Minutes

3.1 Minutes of the Regular Council Meeting held January 19, 2021

4. Business Arising out of the Minutes

None

5 New Business

5.1 Minutes of the 2021 Interim Budget Meeting held on January 19, 2021

5.2 RFD: MOST Grant Distributions

6 Reports

Financial Reports

6.1a Cheque Listing for Council # 20210019-2021062 Jan 14, 2021 - Feb 9, 2021

6.1b December 2020 Bank Rec

6.2 CAO Report February 16, 2021

6.3 Public Works Report January/February 2021

6.4 Mayor/Deputy Mayor/Councilor Reports & Upcoming Meetings February 16, 2021

7. Correspondence

7.1 Greg Sawchuk, Reeve, Municipal District Bonnyville No 87, Letter dated January 20, 2021
RE: Need for a Stronger Western Canadian Municipal Advocate

7.2 Montana Kuhar, Ex Ass.t, MD of Spirit River # 133, email dated January 27, 2021
RE: Letter to Kenney & Rethink the Lockdown Paper

7.3 Barry Moshita, President, Mayor City of Brooks, email dated February 2, 2021
RE: Police Advisory Board - Report on Municipal Policing Priorities January 2021

7.4 Craig Snodgrass, Mayor, High River, AB. Email dated February 3, 2021 RE: Reinstatement
of the 1976 Coal Development Policy

7.5 NAEL Meeting Correspondence RE(A) PPT Decks, (B) NAEL Counsel Presentation ,
(C) Site C Damn Concerns

8. Closed Session

8.1 Section 16, FOIP; Disclosure Harmful to Business Interests of a Third Party

9 Adjournment



The Village of
Nampa
A Place Close To The Heart

Meeting Minutes
Village of Nampa
2021 Interim Operating & Capital Budget Meeting
January 19, 2021
Zoom Meeting
6:30 p.m.

PRESENT:

Deputy Mayor Bulford
Councillor Matiasiewich
Councillor Novak
Councillor Skrlík

ABSENT:

Mayor Butz

IN ATTENDANCE:

CAO Dianne Roshuk

Councillor Skrlík called the meeting to order at 6:30 p.m.

2021 Interim Operating Budget was reviewed by council and Administration and discussions were held.

MOVED by Councillor Skrlík that council adopt the 2021 Interim Operating & Capital Budget as presented with the following additions:

THAT council approve the monthly garbage rate increase of \$5.00 ; from \$11.00 per month to \$16.00 per month as discussed and

THAT Administration advise Public Works of council's approval to purchase a utility trailer in the amount of \$ 6221.51; cost to be included under budget line GL # 2-32-00-763-00 and

THAT Administration bring the budget back to the scheduled regular council meeting on April 19th 2021 for final approval.

CARRIED

Deputy Mayor Bulford adjourned the meeting at 6:49 p.m.

Deputy Mayor Bulford

CAO Dianne Roshuk



Request for Decision (RFD)
Council Meeting February 16, 2021

Topic:

Municipal Operating Support Transfer (MOST)

Background:

Through the Municipal Operating Support Transfer (MOST), the GOA and the Government of Canada are providing funding to support municipalities, which have experienced significant operating impacts due to the COVID 19 pandemic. We had missed the deadline for the grant, however we recently received a call from MA saying that the minister decided to approach municipalities that had not signed up and that we could still submit a signed agreement and that it would be considered.

The Village's eligibility amount under this program is \$ 41,858.00. This money can be used in many different ways, including contributions to other organizations such as community groups (Nampa Ag Society, Nampa Seniors, and FCSS). We can also use the money ourselves for operating losses or deficits incurred (such as any unpaid taxes from 2020).

The agreement has been signed and submitted

We have to have the funds distributed by March 31, 2021. The recipients of the funds do not have a deadline to use the funds and do not have to pay the monies back. Any monies not spent by the Village will have to be returned next summer.

Administration Recommendation:

For discussion



VILLAGE OF NAMPA

Page 1 of 2

Cheque Listing For Council

6.1a

Cheque		Vendor Name	Invoice #	Invoice Description	Invoice Amount	Cheque Amount
Cheque #	Date					
20210019	2021-01-14	ROSHUK, DIANNE G				
20210020	2021-01-14	SURMAN, STEVE C				
20210021	2021-01-14	MCNEIL, JEREMY D				
20210022	2021-01-15	DECHANT, RON	202101151	PAYMENT CREDIT BALANCE PAID	200.00	200.00
20210023	2021-01-18	WORKERS COMPENSATION BOARD	2020 Premiums	PAYMENT 2020 PREMIUMS BALANCE OWIN	3,726.06	3,726.06
20210024	2021-01-27	ALBERTA URBAN MUNICIPALITIES ASSOCIATION	20210246	PAYMENT AUMA MEMBERSHIP	1,092.49	1,092.49
20210025	2021-01-27	CANADIAN LINEN AND UNIFORM	5003649599	PAYMENT MTHLY MAT RENTAL	324.04	324.04
20210026	2021-01-27	DARN MACHINES SERVICES LTD	1024	PAYMENT CVIP ON GRAVEL TRUCK	451.50	451.50
20210027	2021-01-27	HI TECH BUSINESS SYSTEMS	1602911	PAYMENT MTHLY CONTRACT FEE	37.99	37.99
20210028	2021-01-27	MATIASIEWICH, SHIRLEY	6668	PAYMENT ZOOM SUBSCRIPTION	21.00	21.00
20210029	2021-01-27	MIGHTY PEACE TOURIST ASSOCIATION	2021024 2021058	PAYMENT PROFESSIONAL MEMBERSHIP N MUNICIPAL MEMBERSHIP	288.75 1,012.83	1,301.58
20210030	2021-01-27	MUNICIPAL INFORMATION SYSTEMS	20202012	PAYMENT MTLY SUPPORT	587.82	587.82
20210031	2021-01-27	PEACE REGION ECONOMIC DEVELOPMENT ALI	557	PAYMENT PREDAMUNICIPAL MEMBERSHIP	382.20	382.20
20210032	2021-01-27	PETTY CASH	Jan 2021	PAYMENT PETTY CASH	70.76	70.76
20210033	2021-01-27	RECEIVER GENERAL - PAYROLL	2019 EI	PAYMENT EI DISCREPANCY 2019	1,865.89	1,865.89
20210034	2021-01-27	SPIRIT OF THE PEACE	2021 museum	PAYMENT MEMBERSHIP 2021	65.00	65.00
20210035	2021-01-27	TOKER, TEENA	Jan 2021	PAYMENT MTHLY CUSTODIAN FEES	250.00	250.00
20210036	2021-01-27	TRI LINE CONTRACTING SERVICE	4290 4324	PAYMENT DITCH CLEANING 2020 2020 DITCH CLEANING	3,780.00 15,513.75	19,293.75
20210037	2021-01-27	NEW WATER LTD.	220	PAYMENT PARTNER BILLING NOV/DEC 202	21,439.21	21,439.21
20210038	2021-01-27	PEACE REGIONAL WASTE MANAGEMENT COMI	22024 22025	PAYMENT TRANSFER STATION DEC 2020 TIPPING FEES DEC 2020	125.76 171.30	297.06
20210039	2021-01-27	STARS AIR AMBULANCE	1307454-2020	PAYMENT 2020 OPERATIONS	1,000.00	1,000.00
20210040	2021-01-27	NAMPA AUTO & FARM SUPPLY	207466 207528 207935	PAYMENT BRAKES GRAVEL PW TRUCK GRADER BLADE SEAL & PULLEY	485.66 217.82 97.95	801.43
20210041	2021-01-28	ROSHUK, DIANNE G				
20210042	2021-01-28	MATIASIEWICH, SHIRLEY A				
20210043	2021-01-28	SURMAN, STEVE C				



VILLAGE OF NAMPA

Page 2 of 2

Cheque Listing For Council

6-1a

Cheque		Vendor Name	Invoice #	Invoice Description	Invoice Amount	Cheque Amount
Cheque #	Date					
20210044	2021-01-28	MCNEIL, JEREMY D				
20210045	2021-01-28	MATIASIEWICH, EVAN M				
20210046	2021-01-28	BULFORD, QUINTON				
20210047	2021-01-28	NOVAK, CHERYL				
20210048	2021-01-28	BUTZ, CLYNTON				
20210049	2021-01-28	SKRLIK, PERRY				
20210050	2021-01-28	MURPHY, CARSON				
20210051	2021-02-01	LOCAL AUTHORITIES PENSION PLAN	012021	PAYMENT LAPP DEDUCTIONS JANUARY 20	4,911.15	4,911.15
20210052	2021-02-01	RECEIVER GENERAL - PAYROLL	202101	PAYMENT PAYROLL DEDUCTIONS FOR JAN	7,955.05	7,955.05
20210053	2021-02-05	TELUS COMMUNICATIONS INC.	2021 FEB Feb 1 2021 FEB 2021 Office Phone	PAYMENT FIRE DEPT PHONE FAX PHONE LINE PUBLIC WORKS PHONE OFFICE PHONE	69.85 69.85 92.76 179.59	412.05
20210054	2021-02-08	TELUS COMMUNICATIONS INC.	3222777	PAYMENT PHONE MUSEUM	110.80	110.80
20210055	2021-02-08	IWANTWIRELESS CA LTD	109728	PAYMENT MONTHLY SUPPORT FEB 2021	52.45	52.45
20210056	2021-02-08	NAMPA AUTO & FARM SUPPLY	208181	PAYMENT GRADER BLADE - PW	375.56	375.56
20210057	2021-02-09	BELL MOBILITY	Feb 1 2021	PAYMENT PW CELL PHONE	121.21	121.21
20210058	2021-02-09	CAMPUS ENERGY PARTNERS LP	1001420-20210 1419 Feb8 2462ZC 2101-1	PAYMENT ELECTRICITY STREET LIGHTS ELECTRICITY GAS BILLING	2,725.46 3,075.68 1,874.07	7,675.21
20210059	2021-02-09	DALHOUSIE UNIVERSITY	28736	PAYMENT CAO COURSE - CLGA CERTIFICA	985.00	985.00
20210060	2021-02-09	NORTHERN SUNRISE COUNTY	10453 10468	PAYMENT WATER TREATMENT PLAN LOAN GARBAGE PICK UP FEES JAN &	61,572.14 4,000.00	65,572.14
20210061	2021-02-09	TRI LINE CONTRACTING SERVICE	4329	PAYMENT DITCH CLEANING NORTH SIDE F	10,531.50	10,531.50
20210062	2021-02-09	VITAL EFFECT INC	7880	PAYMENT MONTHLY SUPPORT	52.38	52.38

Total 173,326.22

*** End of Report ***

Chief Administrative Officer Report
January 19, 2021 - February 16, 2021

6.2

January 18 - 26 - Worked from home
January 19 - 2021 Interim Budget Meeting by Zoom
January 19 - Regular Council Meeting by Zoom

February 4 - Town Hall Meeting COVID Update (6:30 pm - 7:30 pm)
February 4 - Police Act Review Zoom Meeting -Updates on the Police Act Review and the work of the Alberta Police Advisory Board (4 pm - 6:30 pm)
February 9 - COVID Update for Municipalities with CMOH
Step 1 of the Path forward - Limited indoor and outdoor children's sports and performance activities, one on one indoor personal fitness with a trainer and dine in service at restaurants, cafes and pubs are now permitted province wide, with restrictions (same co horts).

February 16th - 19th Auditors here

Upcoming Meetings/Events

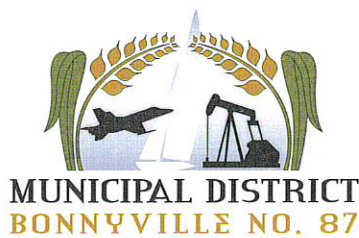
February 17 - Police Act Review Zoom Meeting - Information and discussion on the feasibility of Establishing a Provincial Police Service

February 25 - Public Auction in Council Chambers

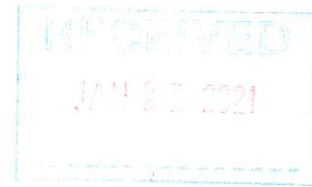
March 16 - Regular Council Meeting

March 24 - MAP Review with Municipal Affairs (Zoom)

- Took water meter readings
- Took sewer lift station readings every day
- Garbage's every Monday
- Alberta one calls as required
- Dump runs as needed
- CC shut off/on as needed
- Maintenance and repairs on equipment as needed
- Water meter repair/replacement as needed
- RF water meter readings as needed
- Maintain sewer break graveled areas
- Run lift station backup generator and put it under load once per month
- Grading as needed
- Clear snow in front of fire hydrants as needed
- Parking lot snow removal as needed
- Driveway snow removal as needed
- Clear snow for walking paths as needed
- Clear ice at water treatment plant as needed
- Sanding as needed
- Haul out piles of snow to snow dump as needed
- Apply sludge mediation bacteria to lift station and lagoons weekly.
- Cleared gutters to widen roads and prep for next snowfall



7.1



January 20, 2021

Village of Nampa
PO Box 69
Nampa, AB T0H 2R0

Attn: Mayor and Council

RE: Need for a Stronger Western Canadian Municipal Advocate

The past few years have presented convincing evidence of the continued lack of advocacy and blatant disregard at the federal level for Western Canada's needs and one of its highly significant industries that impacts us all: the natural resources industry. Our Council here at the Municipal District of Bonnyville (M.D.) is beyond frustrated with this lack of effective representation that Western Canadian municipalities receive.

Currently, our only voice at the national table is that of the Federation of Canadian Municipalities (FCM). From their website, FCM states they *"...advocate for municipalities to be sure their citizens' needs are reflected in federal policies and programs. Year after year, our work benefits every municipal government and taxpayer in Canada, and our programming delivers tools that help municipalities tackle local challenges."*

Question: Do you feel that FCM advocates for the needs of your municipality or western Canada?

Question: Does the annual FCM Conference agenda/tours provide relevant value for your municipality?

Question: Are the needs of western Canada different than those of eastern Canada, and if so, is it time we entertain the idea of a WCM (Western Canadian Municipalities)?

To their credit, FCM did add a Western Economic Solutions Taskforce as one of their 15 program areas. Unfortunately, this initiative – which was created to mitigate the genuine alienation and hostility western Canadian municipalities experienced at the 2019 FCM Annual Conference held in Quebec City – has not produced any real results.

Our hope is that this letter will spark the much-needed conversation and potential solution to this long-standing issue. We sincerely request that you and your Council take the time to truly reflect on the level of service you are receiving from your current federal advocate. Are they truly the federal voice advocating for your citizens and your municipality?

The M.D. and many other communities across Alberta and western Canada are proud supporters and partners of the oil and gas industry. We wish to be a part of a solution that supports industry competitiveness rather than be forced to absorb Ontario's and Quebec's concepts of crippling changes that impact our municipal sustainability.

Thank you in advance for your Council's reflection on this topic and we look forward to hearing any feedback you may have.

Yours sincerely,



Greg Sawchuk
Reeve

cc: Mr. Barry Morishita, President, Alberta Urban Municipalities Association
Mr. Paul McLauchlin, President, Rural Municipalities of Alberta

/eq



Municipal District of Spirit River No. 133

Box 389 Spirit River, Alberta T0H 3G0
E-mail: mdsr133@mdspiritriv.ab.ca

Telephone (780) 864-3500
Fax (780) 864-4303

January 27, 2021

Honourable Premier Kenney
Alberta Premier

Email: premier@gov.ab.ca

Dear Honourable Premier Kenney,

Thank you for your response to our letter regarding our position on the handling of COVID-19 restrictions. We appreciate the tenuous position the government is in when making decisions surrounding the containment of COVID-19.

The MD of Spirit River appreciates the importance of preserving life, however we also recognize that the loss of lives during the shutdown will not be limited to those who die from COVID-19.

The aftermath of the lockdown as identified in the paper *COVID-19: Rethinking the Lockdown Groupthink*, by Ari R Joffe MD ,FRCPC with the Stollery Hospital, clearly outlines the massive cost both financially and to human lives if we continue with the lockdowns.

In the paper Joffe states, " ... lockdowns are far more harmful to human health than COVID-19 can be." We have attached a copy of his paper.

There are numerous other Physicians and papers, including the Great Barrington Declaration (gbdeclaration.org), a statement written by three public health experts from Harvard, Stanford and Oxford, that back the findings of Joffe.

Our council wishes to publicly state that we support the governments steps to reopening the economy and choosing a balanced approach to ensure a quick return to our economy and our wellbeing. We commend the leadership role you are taking.

Sincerely,

Tony Van Rootselaar, Reeve
Municipal District of Spirit River

Cc: Honourable Tyler Shandro Minister of Health
Honourable Nate Glubish, Minister of Service Alberta
Honourable Doug Schweitzer, Minister of Jobs, Economy and Innovation
Todd Loewen, MLA Central Peace Notley
Dan Williams, MLA Peace River

To all RMA and AUMA Members

AIRDRIE	MOUNTAIN VIEW COUNTY	CASTOR	RAYMOND
BEAUMONT	NEWELL, COUNTY OF	CLARESHOLM	REDCLIFF
BROOKS	NORTHERN LIGHTS, COUNTY OF	COALDALE	REDWATER
CALGARY	NORTHERN SUNRISE COUNTY	COALHURST	RIMBEY
CAMROSE	OPPORTUNITY NO. 17, M.D. OF	COCHRANE	ROCKY MOUNTAIN HOUSE
CHESTERMERE	PAINT EARTH NO. 18, COUNTY OF	CORONATION	SEDGEWICK
COLD LAKE	PARKLAND COUNTY	CROSSFIELD	SEXSMITH
EDMONTON	PEACE NO. 135, M.D. OF	DAYSLAND	SLAVE LAKE
FORT SASKATCHEWAN	PINCHER CREEK NO. 9, M.D. OF	DEVON	SMOKY LAKE
GRANDE PRAIRIE	PONOKA COUNTY	DIDSBURY	SPIRIT RIVER
LACOMBE	PROVOST NO. 52, M.D. OF	DRAYTON VALLEY	ST. PAUL
LEDUC	RANCHLAND NO. 66, M.D. OF	DRUMHELLER	STAVELY
LETHBRIDGE	RED DEER COUNTY	ECKVILLE	STETTNER
LLOYDMINSTER	ROCKY VIEW COUNTY	EDSON	STONY PLAIN
MEDICINE HAT	SADDLE HILLS COUNTY	ELK POINT	STRATHMORE
RED DEER	SMOKY LAKE COUNTY	FAIRVIEW	SUNDRE
SPRUCE GROVE	SMOKY RIVER NO. 130, M.D. OF	FALHER	SWAN HILLS
ST. ALBERT	SPIRIT RIVER NO. 133, M.D. OF	FORT MACLEOD	SYLVAN LAKE
WETASKIWIN	ST. PAUL NO. 19, COUNTY OF	FOX CREEK	TABER
CROWSNEST PASS, MUNICIPALITY OF	STARLAND COUNTY	GIBBONS	THORSBY
JASPER, MUNICIPALITY OF	STETTNER NO. 6, COUNTY OF	GRIMSHAW	THREE HILLS
LAC LA BICHE COUNTY	STURGEON COUNTY	HANNA	TOFIELD
MACKENZIE COUNTY	TABER, M.D. OF	HARDISTY	TROCHU
STRATHCONA COUNTY	THORHILD COUNTY	HIGH LEVEL	TURNER VALLEY
WOOD BUFFALO, REGIONAL MUNICIPALITY OF	TWO HILLS NO. 21, COUNTY OF	HIGH PRAIRIE	TWO HILLS
ACADIA NO. 34, M.D. OF	VERMILION RIVER, COUNTY OF	HIGH RIVER	VALLEYVIEW
ATHABASCA COUNTY	VULCAN COUNTY	HINTON	VAUXHALL
BARRHEAD NO. 11, COUNTY OF	WAINWRIGHT NO. 61, M.D. OF	INNISFAIL	VEGREVILLE
BEAVER COUNTY	WARNER NO. 5, COUNTY OF	IRRICANA	VERMILION
BIG LAKES COUNTY	WESTLOCK COUNTY	KILLAM	VIKING
BIGHORN NO. 8, M.D. OF	WETASKIWIN NO. 10, COUNTY OF	LAMONT	VULCAN
BIRCH HILLS COUNTY	WHEATLAND COUNTY	LEGAL	WAINWRIGHT
BONNYVILLE NO. 87, M.D. OF	WILLOW CREEK NO. 26, M.D. OF	MAGRATH	WEMBLEY
BRAZEAU COUNTY	WOODLANDS COUNTY	MANNING	WESTLOCK
CAMROSE COUNTY	YELLOWHEAD COUNTY	MAYERTHORPE	WHITECOURT
CARDSTON COUNTY	ATHABASCA	MCCLENNAN	ACME
CLEAR HILLS COUNTY	BANFF	MILK RIVER	ALBERTA BEACH
CLEARWATER COUNTY	BARRHEAD	MILLET	ALIX
CYPRESS COUNTY	BASHAW	MORINVILLE	ALLIANCE
FAIRVIEW NO. 136, M.D. OF	BASSANO	MUNDARE	AMISK
FLAGSTAFF COUNTY	BEAVER LODGE	NANTON	ANDREW
FOOTHILLS COUNTY	BENTLEY	NOBLEFORD	ARROWWOOD
FORTY MILE NO. 8, COUNTY OF	BLACK DIAMOND	OKOTOKS	BARNWELL
GRANDE PRAIRIE NO. 1, COUNTY OF	BLACKFALDS	OLDS	BARONS
GREENVIEW NO. 16, M.D. OF	BON ACCORD	ONOWAY	BAWLIF
KNEEHILL COUNTY	BONNYVILLE	OYEN	BEISEKER
LAC STE. ANNE COUNTY	BOW ISLAND	PEACE RIVER	BERWYN
LACOMBE COUNTY	BOWDEN	PENHOLD	BIG VALLEY
LAMONT COUNTY	BRUDERHEIM	PICTURE BUTTE	BITTERN LAKE
LEDUC COUNTY	CALMAR	PINCHER CREEK	BOYLE
LESSER SLAVE RIVER NO. 124, M.D. OF	CANMORE	PONOKA	BRETON
LETHBRIDGE COUNTY	CARDSTON	PROVOST	CARBON

MINBURN NO. 27, COUNTY OF

CAROLINE
CHAMPION

CHAUVIN
CHIPMAN
CLIVE
CLYDE
CONSORT
COUTTS
COWLEY
CREMONA
CZAR
DELBURNE
DELIA
DONALDA
DONNELLY
DUCHESS
EDBERG
EDGERTON
ELNORA
EMPRESS
FOREMOST
FORESTBURG
GIROUXVILLE
GLENDON
GLENWOOD
HALKIRK
HAY LAKES
HEISLER
HILL SPRING
HINES CREEK
HOLDEN
HUGHENDEN
HUSSAR
HYTHE
INNISFREE
IRMA
KITSCOTY
LINDEN
LOMOND

CARSTAIRS
LONGVIEW
LOUGHEED

MANNVILLE
MARWAYNE
MILO
MORRIN
MUNSON
MYRNAM
NAMPA
PARADISE VALLEY
ROCKYFORD
ROSALIND
ROSEMARY
RYCROFT
RILEY
SPRING LAKE
STANDARD
STIRLING
VETERAN
VILNA
WARBURG
WARNER
WASKATENAU
YOUNGSTOWN
ARGENTIA BEACH
BETULA BEACH
BIRCH COVE
BIRCHCLIFF
BONDISS
BONNYVILLE BEACH
BURNSTICK LAKE
CASTLE ISLAND
CRYSTAL SPRINGS
GHOST LAKE
GOLDEN DAYS
GRANDVIEW
GULL LAKE
HALF MOON BAY

RAINBOW LAKE
HORSESHOE BAY
ISLAND LAKE
ISLAND LAKE
SOUTH
ITASKA BEACH
JARVIS BAY
KAPASWIN
LAKEVIEW
LARKSPUR
MA-ME-O BEACH
MEWATHA BEACH
NAKAMUN PARK
NORGLENWOLD
NORRIS BEACH
PARKLAND BEACH
PELICAN NARROWS
POINT ALISON
POPLAR BAY
ROCHON SANDS
ROSS HAVEN
SANDY BEACH
SEBA BEACH
SILVER BEACH
SILVER SANDS
SOUTH BAPTISTE
SOUTH VIEW
SUNBREAKER COVE
SUNDANCE BEACH
SUNRISE BEACH
SUNSET BEACH
SUNSET POINT
VAL QUENTIN
WAIPAROUS
WEST BAPTISTE
WEST COVE
WHISPERING HILLS

CARMANGAY
WHITE SANDS
YELLOWSTONE

I.D. NO. 04 (WATERTON)
I.D. NO. 09 (BANFF)
I.D. NO. 12 (JASPER NATIONAL PARK)
I.D. NO. 13 (ELK ISLAND)
I.D. NO. 24 (WOOD BUFFALO)
I.D. NO. 25 (WILLMORE WILDERNESS)
IMPROVEMENT DISTRICT NO. 349
KANANASKIS IMPROVEMENT DISTRICT
SPECIAL AREAS BOARD

*****To all RMA and AUMA Members*****

AIRDRIE	MOUNTAIN VIEW COUNTY	CASTOR	RAYMOND
BEAUMONT	NEWELL, COUNTY OF	CLARESHOLM	REDCLIFF
BROOKS	NORTHERN LIGHTS, COUNTY OF	COALDALE	REDWATER
CALGARY	NORTHERN SUNRISE COUNTY	COALHURST	RIMBEY
CAMROSE	OPPORTUNITY NO. 17, M.D. OF	COCHRANE	ROCKY MOUNTAIN HOUSE
CHESTERMERE	PAINT EARTH NO. 18, COUNTY OF	CORONATION	SEDGEWICK
COLD LAKE	PARKLAND COUNTY	CROSSFIELD	SEXSMITH
EDMONTON	PEACE NO. 135, M.D. OF	DAYSLAND	SLAVE LAKE
FORT SASKATCHEWAN	PINCHER CREEK NO. 9, M.D. OF	DEVON	SMOKY LAKE
GRANDE PRAIRIE	PONOKA COUNTY	DIDSBURY	SPIRIT RIVER
LACOMBE	PROVOST NO. 52, M.D. OF	DRAYTON VALLEY	ST. PAUL
LEDUC	RANCHLAND NO. 66, M.D. OF	DRUMHELLER	STAVELY
LETHBRIDGE	RED DEER COUNTY	ECKVILLE	STETTNER
LLOYDMINSTER	ROCKY VIEW COUNTY	EDSON	STONY PLAIN
MEDICINE HAT	SADDLE HILLS COUNTY	ELK POINT	STRATHMORE
RED DEER	SMOKY LAKE COUNTY	FAIRVIEW	SUNDRE
SPRUCE GROVE	SMOKY RIVER NO. 130, M.D. OF	FALHER	SWAN HILLS
ST. ALBERT	SPIRIT RIVER NO. 133, M.D. OF	FORT MACLEOD	SYLVAN LAKE
WETASKIWIN	ST. PAUL NO. 19, COUNTY OF	FOX CREEK	TABER
CROWSNEST PASS, MUNICIPALITY OF	STARLAND COUNTY	GIBBONS	THORSBY
JASPER, MUNICIPALITY OF	STETTNER NO. 6, COUNTY OF	GRIMSHAW	THREE HILLS
LAC LA BICHE COUNTY	STURGEON COUNTY	HANNA	TOFIELD
MACKENZIE COUNTY	TABER, M.D. OF	HARDISTY	TROCHU
STRATHCONA COUNTY	THORHILD COUNTY	HIGH LEVEL	TURNER VALLEY
WOOD BUFFALO, REGIONAL MUNICIPALITY OF			
ACADIA NO. 34, M.D. OF	TWO HILLS NO. 21, COUNTY OF	HIGH PRAIRIE	TWO HILLS
ATHABASCA COUNTY	VERMILION RIVER, COUNTY OF	HIGH RIVER	VALLEYVIEW
BARRHEAD NO. 11, COUNTY OF	VULCAN COUNTY	HINTON	VAUXHALL
BEAVER COUNTY	WAINWRIGHT NO. 61, M.D. OF	INNISFAIL	VEGREVILLE
BIG LAKES COUNTY	WARNER NO. 5, COUNTY OF	IRRICANA	VERMILION
BIGHORN NO. 8, M.D. OF	WESTLOCK COUNTY	KILLAM	VIKING
BIRCH HILLS COUNTY	WETASKIWIN NO. 10, COUNTY OF	LAMONT	VULCAN
BONNYVILLE NO. 87, M.D. OF	WHEATLAND COUNTY	LEGAL	WAINWRIGHT
BRAZEAU COUNTY	WILLOW CREEK NO. 26, M.D. OF	MAGRATH	WEMBLEY
CAMROSE COUNTY	WOODLANDS COUNTY	MANNING	WESTLOCK
CARDSTON COUNTY	YELLOWHEAD COUNTY	MAYERTHORPE	WHITECOURT
CLEAR HILLS COUNTY	ATHABASCA	MCCLENNAN	ACME
CLEARWATER COUNTY	BANFF	MILK RIVER	ALBERTA BEACH
CYPRESS COUNTY	BARRHEAD	MILLET	ALIX
FAIRVIEW NO. 136, M.D. OF	BASHAW	MORINVILLE	ALLIANCE
FLAGSTAFF COUNTY	BASSANO	MUNDARE	AMISK
FOOTHILLS COUNTY	BEAVER LODGE	NANTON	ANDREW
FORTY MILE NO. 8, COUNTY OF	BENTLEY	NOBLEFORD	ARROWWOOD
GRANDE PRAIRIE NO. 1, COUNTY OF	BLACK DIAMOND	OKOTOKS	BARNWELL
GREENVIEW NO. 16, M.D. OF	BLACKFALDS	OLDS	BARONS
KNEEHILL COUNTY	BON ACCORD	ONOWAY	BAWL F
LAC STE. ANNE COUNTY	BONNYVILLE	OYEN	BEISEKER
LACOMBE COUNTY	BOW ISLAND	PEACE RIVER	BERWYN
LAMONT COUNTY	BOWDEN	PENHOLD	BIG VALLEY
LEDUC COUNTY	BRUDERHEIM	PICTURE BUTTE	BITTERN LAKE
LESSER SLAVE RIVER NO. 124, M.D. OF	CALMAR	PINCHER CREEK	BOYLE
LETHBRIDGE COUNTY	CANMORE	PONOKA	BRETON
	CARDSTON	PROVOST	CARBON

MINBURN NO. 27, COUNTY OF

CAROLINE
CHAMPION

CHAUVIN
CHIPMAN
CLIVE
CLYDE
CONSORT
COUTTS
COWLEY
CREMONA
CZAR
DELBURNE
DELIA
DONALDA
DONNELLY
DUCHESS
EDBERG
EDGERTON
ELNORA
EMPRESS
FOREMOST
FORESTBURG
GIROUXVILLE
GLENDON
GLENWOOD
HALKIRK
HAY LAKES
HEISLER
HILL SPRING
HINES CREEK
HOLDEN
HUGHENDEN
HUSSAR
HYTHE
INNISFREE
IRMA
KITSCOTY
LINDEN
LOMOND

CARSTAIRS
LONGVIEW
LOUGHEED

MANNVILLE
MARWAYNE
MILO
MORRIN
MUNSON
MYRNAM
NAMPA
PARADISE VALLEY
ROCKYFORD
ROSALIND
ROSEMARY
RYCROFT
RILEY
SPRING LAKE
STANDARD
STIRLING
VETERAN
VILNA
WARBURG
WARNER
WASKATENAU
YOUNGSTOWN
ARGENTIA BEACH
BETULA BEACH
BIRCH COVE
BIRCHCLIFF
BONDISS
BONNYVILLE BEACH
BURNSTICK LAKE
CASTLE ISLAND
CRYSTAL SPRINGS
GHOST LAKE
GOLDEN DAYS
GRANDVIEW
GULL LAKE
HALF MOON BAY

RAINBOW LAKE
HORSESHOE BAY
ISLAND LAKE
ISLAND LAKE
SOUTH
ITASKA BEACH
JARVIS BAY
KAPASWIN
LAKEVIEW
LARKSPUR
MA-ME-O BEACH
MEWATHA BEACH
NAKAMUN PARK
NORGLENWOLD
NORRIS BEACH
PARKLAND BEACH
PELICAN NARROWS
POINT ALISON
POPLAR BAY
ROCHON SANDS
ROSS HAVEN
SANDY BEACH
SEBA BEACH
SILVER BEACH
SILVER SANDS
SOUTH BAPTISTE
SOUTH VIEW
SUNBREAKER COVE
SUNDANCE BEACH
SUNRISE BEACH
SUNSET BEACH
SUNSET POINT
VAL QUENTIN
WAIPAROUS
WEST BAPTISTE
WEST COVE
WHISPERING HILLS

CARMANGAY
WHITE SANDS
YELLOWSTONE

I.D. NO. 04 (WATERTON)
I.D. NO. 09 (BANFF)
I.D. NO. 12 (JASPER NATIONAL PARK)
I.D. NO. 13 (ELK ISLAND)
I.D. NO. 24 (WOOD BUFFALO)
I.D. NO. 25 (WILLMORE WILDERNESS)
IMPROVEMENT DISTRICT NO. 349
KANANASKIS IMPROVEMENT DISTRICT
SPECIAL AREAS BOARD

Rethinking the Lockdown Groupthink

COVID-19: Rethinking the Lockdown Groupthink**Author:** Ari R Joffe MD, FRCPC***Affiliation:** Department of Pediatrics, Division of Critical Care Medicine, University of Alberta and Stollery Children's Hospital, Edmonton, Alberta, Canada; John Dossetor Health Ethics Center, University of Alberta, Edmonton, Alberta, Canada.**Corresponding Author:** Ari R Joffe MD; Email: ari.joffe@ahs.ca ORCID: <http://orcid.org/0000-0002-4583-707X>**Keywords:** Cost-benefit analysis; COVID-19; Groupthink; Lockdowns; Public Health

Abstract: The Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) has caused the Coronavirus Disease 2019 (COVID-19) worldwide pandemic in 2020. In response, most countries in the world implemented lockdowns, restricting their population's movements, work, education, gatherings, and general activities in attempt to 'flatten the curve' of COVID-19 cases. The public health goal of lockdowns was to save the population from COVID-19 cases and deaths, and to prevent overwhelming health care systems with COVID-19 patients. In this narrative review I explain why I changed my mind about supporting lockdowns. First, I explain how the initial modeling predictions induced fear and crowd-effects [i.e., groupthink]. Second, I summarize important information that has emerged relevant to the modeling, including about infection fatality rate, high-risk groups, herd immunity thresholds, and exit strategies. Third, I describe how reality started sinking in, with information on significant collateral damage due to the response to the pandemic, and information placing the number of deaths in context and perspective. Fourth, I present a cost-benefit analysis of the response to COVID-19 that finds lockdowns are far more harmful to public health than COVID-19 can be. Controversies and objections about the main points made are considered and addressed. I close with some suggestions for moving forward.

Rethinking the Lockdown Groupthink

Introduction

The Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) initially caused Coronavirus Disease 2019 (COVID-19) in China in December 2019, and has caused a worldwide pandemic in 2020. In response, most countries in the world implemented lockdowns, restricting their population's movements, work, education, gatherings, and general activities in attempt to 'flatten the curve' of COVID-19 cases. Even now, as the so-called 'second-wave' of COVID-19 cases is occurring, governments are considering and some implementing another lockdown to again 'flatten the curve'. The public health goal of lockdowns is to save the population from COVID-19 cases and deaths, and to prevent overwhelming health care systems with COVID-19 patients. I was a strong proponent of lockdowns when the pandemic was first declared.¹

In this narrative review I explain why I changed my mind. First, I explain how the initial modeling predictions induced fear and crowd-effects [i.e., groupthink]. Second, I summarize important information that has emerged relevant to the modeling. Third, I describe how reality started sinking in, with information on significant collateral damage from the response to the pandemic, and on the number of deaths in context. Fourth, I present a cost-benefit analysis of the response to COVID-19. I close with some suggestions for moving forward.

An important point must be emphasized. The COVID-19 pandemic has caused much morbidity and mortality. This morbidity and mortality have been, and continue to be, tragic.

1. The initial predictions induce fear

1.1 How it started: modelling

Early modeling made concerning predictions that induced fear (Table 1). Kissler et al. predicted the need for intermittent lockdowns occurring for a total of 75% of the time, even after July 2022, to avoid "overwhelming critical care capacity."²⁻⁴ In their discussion they wrote that the response "is likely to have profoundly negative economic, social, and educational consequences... We do not take a position on the advisability of these scenarios given the economic burden...."² On March 16, 2020, the Imperial College COVID-19 Response Team published modelling of the impact of non-pharmaceutical interventions (NPI) to reduce COVID-19 mortality and healthcare demand in the United States (US) and United Kingdom (UK).⁵ They wrote that suppression "needs to be in force for the majority [>2/3 of the time] of the 2 years of the simulation," without which there would be 510,000 deaths in Great Britain and 2.2 million deaths in the United States by mid-April, surpassing ICU demand by 30 times.⁵ In their discussion they wrote that "we do not consider the ethical or economic implications [page 4]... The social and economic effects of the measures which are needed to achieve this policy goal will be profound [page 16]...."⁵ The Imperial College COVID-19 Response Team extended this to the global impact of the pandemic on March 26, 2020,⁶ and estimated that without lockdowns there would be "7.0 billion infections and 40 million deaths globally this year."⁶ In their discussion they wrote "we do not consider the wider social and economic costs of suppression, which will be high and may be disproportionately so in lower income settings."⁶ In a later publication, this group modeled that "across 11 countries [in Europe], since the beginning of the epidemic [to May 4], 3,100,000 (2,800,000 – 3,500,000) deaths have been averted due to [NPI] interventions...."⁷ Another group similarly claimed that, in 5 countries [China, South Korea, Iran, France, US], NPIs "prevented or delayed [to April 6] on the order of 62 million confirmed cases."⁸

Rethinking the Lockdown Groupthink

1.2 How it took off: Crowd Effects [Groupthink]

There ensued a contagion of fear and policies across the world.⁹⁻¹² Social media spread a growing sense of panic.¹³ Popular media focused on absolute numbers of COVID-19 cases and deaths independent of context, with a “sheer one-sided focus” on preventing infection.¹² There was an appeal of group hysteria; “everyone got a break from their ambitions and other burdens carried in normal life”, and became united in crowds, which have a numbing effect.⁹ There was talk of “acting together against a common threat”, “about seeming to reduce risks of infection and deaths from this one particular disease, to the exclusion of all other health risks or other life concerns”, with virtue signaling to the crowd, of “something they love to hate and be seen to fight against.”⁹ A war effort analogy is apt, with the “unquestioning presumption that the cause is right, that the fight will be won, that naysayers and non-combatants [e.g., not wearing a mask] are basically traitors, and that there are technical solutions [e.g., vaccine and drugs] that will quickly overcome any apparent problem or collateral damage.”⁹ This was associated with a “disregard and disinterest on the part of individuals in the enormity of the collateral damage, either to their own kids, people in other countries, their own futures....”⁹ The crisis was framed as a “war against an invisible enemy,” presenting the false choice between “lives and livelihood,” spreading fear and anxiety while ignoring the costs of the measures taken - this resulted in conformity and obedience.^{12,13} There has been a strong positive association between new daily and total confirmed COVID-19 cases in a country and support for the heads of government, reflecting the “rally ‘round the flag’” effect [“the perception that one’s group is under attack and hence unity is required to defend the group”].¹⁴

The NPIs spread to ~80% of OECD countries within a 2-week period in March 2020.¹⁵ A main predictor of a country implementing NPIs was prior adoptions of a policy among spatially proximate countries, i.e., the number of earlier adopters in the same region.¹⁵ Variables not predicting adoption of NPIs included the number of cases or deaths, population >65 years old, or hospital beds per capita in the country.¹⁵ It seems we were all “stuck in this emotional elevation of COVID-19 deaths and suffering above everything else that could possibly matter.”¹⁶ There was the unquestioned assumption that “there were and are no alternatives to extreme measures implemented on entire populations with little consideration of cost and consequences [externalities].”¹⁰ Even now, how a country ‘performed’ is measured by COVID-19 cases and deaths without denominators, without other causes of deaths considered, without considering overall population health trade-offs “that cannot be wished away” [e.g., the future of our children from lack of education and social interaction, and “changes to our wealth-generating capacity that has to pay for future policies”],⁹ and without considering how sustainable current policies are [protection is temporary and leaves us susceptible; “there is no exit from the pandemic; there is only an exit from the response to it”¹⁰].

All of this, even though in October 2019 the WHO published that for any future Influenza pandemic: travel-related measures are “unlikely to be successful... are likely to have prohibitive economic consequences”; “[measures] not recommended in any circumstances: contact tracing, quarantine of exposed individuals, border closure”; social distancing measures [closures of workplace, avoiding crowding and closing public areas] “can be highly disruptive, and the cost of these measures must be weighed against their potential impact”; and “border closures may be considered only by small island nations in severe pandemics... but must be weighed against potentially serious economic consequences.”¹⁷ Referring to the 2009 influenza pandemic, Bonneux and Van Damme wrote that “the culture of fear” meant that “worst-case thinking replaced balanced risk assessment” on the part of influenza “experts”.¹⁸ But “the modern disease expert knows a lot about the disease in question, but does not necessarily know much about general public health, health economics, health policy, or public

Rethinking the Lockdown Groupthink

policy, which are much more about priority setting and hence resource allocation between competing priorities [because resources are limited, wise allocation saves lives].”¹⁹

Some of this crowd effect is related to cognitive biases, “the triumph of deeply human instincts over optimal policy.”²⁰ Identifiable lives bias included the identifiable victim effect [we ignore hidden ‘statistical’ deaths reported at the population level], and identifiable cause effect [we prioritize efforts to save lives from a known cause even if more lives would be saved through alternative responses]. Present bias made us prefer immediate benefits to even larger benefits in the future [steps that would prevent more deaths over the longer term are less attractive].²⁰⁻²² The proximity and vividness of COVID-19 cases (i.e., availability and picture superiority bias), and anchoring bias [we adhere to our initial hypothesis, and disregard evidence that disproves our favorite theory] affected our reasoning.^{21,23} Superstitious bias, that action is better than non-action even when evidence is lacking, reduced anxiety.¹² Escalation of commitment bias, investing more resources into a set course of action even in the face of evidence there are better options, made us stand by prior decisions.²⁴ We need to take an “effortful pause”, reflecting on aspects of the pandemic that don’t fit with our first impressions.²⁵ The groupthink [“the tendency for groups to let the desire for harmony and conformity prevail, resulting in dysfunctional decision-making processes... becoming less willing to alter their course of action once they settle on it”] needs to be replaced by deliberative consideration of all the relevant information.²⁴

2. Important New Information Emerging

2.1 The Infection Fatality Rate (IFR)

Based on seroprevalence data as of September 9, 2020, including 82 estimates from across 51 locations in the world, Ioannidis found that the median corrected IFR was 0.23% [range 0.00 to 1.54%].²⁶ Among those <70 years old the median crude and corrected IFR was 0.05% [range 0.00 to 0.31%]. He estimated that for those <45 years old the IFR was almost 0%, 45-70 years old about 0.05-0.30%, and ≥70 years old ≥1%, rising to up to 25% for some frail elderly people in nursing homes.²⁷ He estimated that at that point there were likely 150-300 million infections that had occurred in the world, not the reported 13 million, most being asymptomatic or mildly symptomatic.^{26,27} The WHO recently estimated that about 10% of the global population may have been already infected, which, with a world population of 7.8 billion, and 1.16 million deaths, would make a rough approximation of IFR as 0.15%.²⁸

Even these numbers are most likely a large *over-estimate* of the IFR. First, in serosurveys the vulnerable [e.g., homeless, imprisoned, institutionalized, disadvantaged people], who have higher COVID-19 incidence, are more difficult to recruit. Second, there is likely a healthy volunteer bias in serosurvey studies. Third, and most importantly, there is a lack of sensitivity of serology.²⁹⁻³⁴ Many reports now document there is often a rapid loss of antibody in COVID-19 patients that were less severely ill.²⁹⁻³⁶ Moreover, at least 10% of COVID-19 patients never seroconvert, and many more may only develop a mucosal IgA response,^{37,38} or only a T-cell response [which may be the case in up to 50% of mild infections].^{39,40} Finally, most data come from unusual epicenters where “infection finds its way into killing predominantly elderly citizens” in nursing homes and hospitals,²⁶ and where “[in Italy, Spain, France] an underfunded, understaffed, overstretched and increasingly privatized and fractured healthcare system contribute to higher mortality rates... [Lombardy] has long been an experimental site for healthcare privatization.”¹⁰ With “precise non-pharmacological measures that selectively try to protect high-risk vulnerable populations and settings, the IFR may be brought even lower.”²⁶

Rethinking the Lockdown Groupthink

A serology-informed estimate of the IFR in Geneva, Switzerland put the IFR at: age 5-9 years 0.0016% (95% CrI 0, 0.019), 10-19 years 0.00032% (95% CrI 0, 0.0033), 20-49 years 0.0092% (95% CrI 0.0042, 0.016), 50-64 years 0.14% (95% CrI 0.096, 0.19), and age 65+ outside of assisted care facilities 2.7% (95% CrI 1.6, 4.6), for an overall population IFR 0.32% (95% CrI 0.17, 0.56).⁴¹ Similarly, a large study from France found an inflection point in IFR around the age of 70 years [see their Figure 2D].⁴²

2.2 High-risk groups

Ioannidis et al. analyzed reported deaths from epicenters, in 14 countries and 13 states in the United States, to June 17, 2020.⁴³ They found that in those age <65 years the relative risk of death was 30-100X lower in Europe and Canada, and 16-52X lower in the USA, compared to those ≥65 years old.⁴³ They estimated that those age 40-65 years old have double the risk of the overall <65 year old group, and females have 2X lower risk than males.⁴³ This is compatible with a steep inflection point in the IFR around the age of 70 years old. Older adults in nursing homes accounted for at least half of the COVID-19 deaths in Europe and North America, and over 80% in Canada.^{44,45} In nursing homes the usual median survival is ~2.2 years, with a yearly mortality rate >30%, even without COVID-19.⁴⁶ Outbreaks of the seasonal respiratory coronavirus in adults living in long-term care facilities are common, with case-fatality rates of 8%.⁴⁷ Ioannidis et al estimated that the average daily risk of COVID-19 death for an individual <65 years old was equivalent to the risk from driving between 12-82 miles/day during the pandemic period, higher in the UK and 8 states [106-483 miles/day], and only 14 miles/day in Canada.⁴³

By far the most important risk factor is older age.⁴¹⁻⁴³ There is a ~1000 fold difference in death risk for people >80 years old versus children.⁴³ In the largest observational study I am aware of, the OpenSAFELY population in the UK, including over 17 million people with 10,900 COVID-19 deaths, compared to those age 50-59 years old, the Hazard Ratio for death from COVID-19 ranged from 0.06 for those age 18-39 years, to >10 for those age >80 years.⁴⁸ In comparison, even important co-morbidities such as severe obesity, uncontrolled diabetes, recent cancer, chronic respiratory or cardiac or kidney disease, and stroke or dementia rarely had HR approaching ≥2.⁴⁸ Those co-morbidities with HR>2, including hematological malignancy, severe chronic kidney disease, and organ transplant, affected only 0.3%, 0.5%, and 0.4% of the total population.⁴⁸

A rapid systematic review found that only age had a “consistent and high strength association with hospitalization and death from COVID-19... strongest in people older than 65 years...”⁴⁹ Other risk groups for mortality had either a low-moderate effect [obesity, diabetes mellites, male biological sex, ethnicity, hypertension, cardiovascular disease, COPD, asthma, kidney disease, cancer] and/or were inconsistently found to have an effect in the literature [obesity, diabetes mellites, pregnancy, ethnicity, hypertension, cardiovascular disease, COPD, kidney disease].⁴⁹ Even with these risk factors, the absolute risk may still be low, given the overall IFR in the population at that age.

2.3 Objection: Is This Age Discrimination?

An objection may be that singling out the elderly as high risk is age discrimination. This is false on two counts. First, pointing out the truly high-risk group is the elderly is only emphasizing that this is the group that requires protection from severe COVID-19 outcomes. Second, as Singer has pointed out, “what medical treatment does, if successful, is prolong lives. Successfully treating a disease that kills children and young adults is, other things being equal, likely to lead to a greater prolongation, and thus do more good, than successfully treating a disease that kills people in the 70’s, 80’s, and 90’s.”⁵⁰ In fact, when we try to stay healthy “what we are trying to do is to live as long as we can, compatibly with

Rethinking the Lockdown Groupthink

having a positive quality of life for the years that remain to us. If life is a good, then, other things being equal, it is better to have more of it rather than less.”⁵⁰ We should count every quality adjusted life year equally, whether it is in the life of a teenager or a 90-year old.^{50,51} This was also the conclusion of “The Fair Priority Model” for global vaccine allocation, prioritizing preventing premature death using a standard expected years of life lost metric.⁵²

Different from discrimination such as racism [“no one who is black was ever white”], in this case “everyone who is old was once young”, i.e., there is an impartial age-neutral perspective from which we can all see that it is in everyone’s interests to save the lives of younger people.⁵¹ In a thought-experiment, Singer asks us to imagine that you have just become a parent, at some stage in your child’s life she is likely to be infected with a dangerous virus, and her chances of being infected and dying from the infection are the same in any year of her life. Now imagine that curative drug A, effective if <40 years old, and drug B, effective if >40 years old, are so costly that the government cannot afford both to be produced. Which drug should be produced? It is clearly contrary to your child’s interests to vote for drug B: this would increase her risk of dying before her 40th birthday; to improve her chances of living a longer life, we vote for drug A.⁵¹

Veil of ignorance reasoning is a widely respected and transparent standard for adjudicating claims of fairness. A fair distribution of resources is said to be one that people would choose out of self-interest, without knowing whom among those affected they will be: what would I want if I didn’t know who I was going to be? In an experimental study participants were asked to decide whether to give the last available ventilator in their hospital to the 65 year old who arrived first and is already being prepped for the ventilator, or the 25 year old who arrived moments later, assuming whoever is saved will live to age 80 years old. In the veil of ignorance condition, the participant was asked to “imagine that you have a 50% chance of being the older patient, and 50% the younger.”⁵³ Asked if “it is morally acceptable to give the last ventilator to the younger patient”, 67% in the veil of ignorance condition vs. 53% in control answered ‘yes’ (odds ratio 1.69; 95% CI 1.12, 2.57); compared to younger age participants (18-30 years), older participants (odds ratio 3.98) and middle age participants (odds ratio 2.02) were more likely to agree.⁵³ Asked if “you want the doctor to give the ventilator to the younger patient”, 77% answered ‘yes’, maximizing the number of life-years saved rather than the number of lives saved.⁵³

2.4 The Herd Immunity Threshold

The classical herd immunity level is calculated based on the basic reproduction number (R_0) as $(1 - 1/R_0)$, and is the proportion of the population that must be immune to a virus before the effective reproduction number (R_e) is <1, and thus the virus cannot perpetuate itself in the population. This calculation assumes a homogeneously mixing population, where all are equally susceptible and infectious. For R_0 2.5, the threshold is ~60% of the population. However, the assumption is not valid, as there is heterogeneity in social mixing and connectivity, with higher and lower levels of activity and contacts. One model incorporating heterogeneity of social mixing found the threshold, for R_0 2.5, to be 43%, and likely lower as other heterogeneity in the population was not modelled [e.g., sizes of households, attending school or big workplaces, metropolitan versus rural location, protecting the elderly, etc.].⁵⁴ A model that incorporated variation in connectivity compatible with other infectious diseases found that for R_0 3, the threshold is 10-25% of the population developing immunity.⁵⁵ Another model that “fit epidemiological models with inbuilt distributions of susceptibility or exposure to SARS-CoV-2 outbreaks” calculated “herd immunity thresholds around 10-20% [because]... immunity induced by infection... [contrary to random vaccination] is naturally selective.”⁵⁶ In support of this heterogeneity,

Rethinking the Lockdown Groupthink

it is now known that there is overdispersion of transmission of SARS-CoV-2, with 80% of secondary infections arising from just ~10% of infected people.⁵⁷⁻⁵⁹

2.5 Objection: consider Sweden

It has been claimed that Sweden's strategy of achieving herd immunity failed, with excess deaths and a suffering economy. However, that is not clear. First, cases and deaths fell consistently in later July/August, with deaths continuing at a very low level into October despite no lockdown.⁶⁰ Second, serosurveys in mid-July found 14.4% of the population may be seropositive; thus, with 5761 deaths as of August 1, in a population of 10.23 million, the crude IFR may have been 0.39%, and even lower considering the sensitivity of serology discussed above.⁶¹ Early on, Sweden did not adequately protect those in nursing homes, a failing that also inflates the IFR.⁶² The excess all-cause mortality per 100,000 up to July 25, 2020 in Sweden was 50.8, lower than in England and Wales, Spain, Italy, Scotland, Belgium, Netherlands, France, and the US.^{62,63} Third, in a globalized world, with entangled webs of supply, demand, and beliefs, "what we do here will devastate people not just here, but also elsewhere and everywhere."⁶⁴ Compared to Denmark, with an economy heavily dependent on pharmaceuticals, Sweden's recession looks bad. However, compared to the European Union, Sweden looks good; the European Commission forecasts a better 2020 economic result for Sweden (GDP -5.3%) than many other comparable European countries (e.g., France -10.6%, Finland -6.3%, Austria -7.1%, Germany -6.3%, Netherlands -6.8%, Italy -11.2%, Denmark -5.2%).⁶⁵

2.6 The Exit Strategy

Herd immunity appears to be the only exit from the response to COVID-19. This can be achieved naturally, or through vaccine. For the reasons given here, it is very possible that the lockdowns are only delaying the inevitable.

There are problems with the natural herd immunity approach involving the currently projected and implemented waves of lockdowns. First, this will take years to occur, causing economic and social devastation. This also assumes immunity is long-lasting such that cycles of shutting down can be successful over 2 or 3 years, and without which it is more likely COVID-19 will be an annual occurrence.² Second, the less devastating test-trace-isolation/quarantine strategy seems not feasible. In the United States it was estimated that there would be a need to train an extra 100,000 public health workers, and to do >5 million SARS-CoV-2 tests per day, necessitating the building of many new very large testing factories.⁶⁶ Countries would still need to keep borders closed and maintain physical distancing (e.g., no large events) in order to make contact tracing feasible; this would be for years, during which people may become very reluctant to be tested. Modeling suggests that to be successful, because asymptomatic and pre-symptomatic individuals may account for 48-62% of transmission (even in nursing home residents),⁶⁷ contact tracing and quarantine would have to occur within 0.5 days for >75% of contacts, necessitating mobile app technology that has its own feasibility and ethical problems.⁶⁸⁻⁷⁰

Vaccine induced herd immunity involves many assumptions. First, there will be the discovery of an effective and safe vaccine that does not cause antibody-dependent (or other immune) enhancement; this, even though the problem in severe COVID-19 may be the host response, especially in the elderly and children.⁷¹⁻⁷³ Second, the immune response will be durable, not last for only months, and have little immunosenescence [reduced response to vaccine with rapid decline of antibody levels] in the elderly.^{72,74} Third, that mass production and delivery of the vaccine will occur very soon, and be done equitably to all humans on Earth; otherwise, there is the risk of conflict, war, and terrorism in response

Rethinking the Lockdown Groupthink

to gross inequity in vaccine distribution.⁵² In response to the 2009 pandemic of H1N1 Influenza the United States achieved a weekly vaccination rate of only 1% of the population.⁷² Vaccine refusers may include 30% of the population in North America and globally,^{72,75} and if they have “increased contact rates relative to the rest of the population, vaccination alone may not be able to prevent an outbreak.”⁷² There is already competition among high income countries, and likely crowding out of low-income countries that represent about half of the human population.⁷⁶ The only globally eradicated human disease is smallpox, which took “30 years to achieve”, and the “fastest historical development of a [new] vaccine was 4 years (Merck: mumps), while most take 10 years.”⁷⁷

3. Reality Sinking In

3.1 Iatrogenic Collateral Harms: lockdown as a ‘drug’ with dangerous side-effects when its use is prolonged

The COVID-19 response has threatened to make, and likely has already made, several Sustainable Development Goals for the most vulnerable among us in low-income countries out of reach.⁷⁸⁻⁸² The numbers involved are staggering, and in the many millions (Table 2). The response has had major detrimental effects on childhood vaccination programs, education, sexual and reproductive health services, food security, poverty, maternal and under five mortality, and infectious disease mortality.⁷⁸⁻⁹³ The effect on child and adolescent health will “set the stage for both individual prosperity and the future human capital of all societies.”⁹⁴ The destabilizing effects may lead to chaotic events (e.g., riots, wars, revolutions).^{95,96}

In high-income countries, the collateral damage has also been staggering (Table 3), affecting visits to emergency departments and primary care for acute (e.g., myocardial infarction, stroke) and ‘non-urgent’ (‘elective’ surgery, and cancer diagnosis and treatment) conditions, intimate partner violence, deaths of despair, and mental health.^{12,97-112} Of excess deaths occurring during the pandemic in high-income countries, 20-50% are not due to COVID-19.^{62,113-115} There was an unexplained 83% increase of 10,000 excess deaths from dementia in England/Wales in April, and an increase in non-COVID-19 Alzheimer disease/dementia deaths in the US, attributed to lack of social contact causing a deterioration in health and wellbeing of these patients.^{115,116}

COVID-19 “Is a disease of inequality and it also creates even more inequality.”⁹⁵ Unequal structural determinants of health meant that disadvantaged minorities have experienced a greater toll from the COVID-19 “Great Lockdown”,¹¹⁷ with contributors including lower income (e.g., economic and job insecurity), homelessness or crowding at home (and in transportation), worse health care (and pre-existing health disparities), and inability to work from home (e.g., for essential, manual, and temporary workers).^{45,95,118,119} COVID-19 policing has involved “racial profiling and violence, crippling punishments for those living in poverty, and criminalization of mental health.”¹²⁰ Refugees are particularly vulnerable, undertaking “arguably the most essential form of travel... with little access to water, space or health care.”¹²⁰ The effect on the health of women and girls is particularly severe, disproportionately affecting sexual and reproductive health services, income, and safety.^{121,122}

3.2 Numbers in Context

Numbers without denominators and without context are deceiving. Some data in this section may put the COVID-19 pandemic numbers in perspective.

Rethinking the Lockdown Groupthink

Assuming all deaths *with* COVID-19 are deaths *from* COVID-19, in the USA as of August 22, 2020, COVID-19 was the cause of 9.24% of overall deaths; this means that >90% of deaths are not a focus of our attention (ETable 1, see Additional file 1).¹²³ Similarly, in Canada, COVID-19 was the cause of 5.96% of estimated deaths over the first 6 months of 2020, again meaning >94% of deaths are not a focus of our attention, and not being reported daily in the press as are COVID-19 deaths (ETable 2, see Additional file 1).^{124,125} A similar analysis in the UK found that, during 16 weeks of the pandemic, the risk of death was “equivalent to experiencing around 5 weeks extra ‘normal’ risk for those over [age] 55, decreasing steadily with age, to just 2 extra days for schoolchildren... [and in those] over 55 who are [detected as] infected with COVID-19, the additional risk of dying is slightly more than the ‘normal’ risk of death from all other causes over one year.”¹²⁶

Across the world in 2019 there were 58,394,000 deaths, >4.87 million deaths/month and >159,983 deaths/day; COVID-19 deaths are shown relative to these underlying deaths in Table 4.^{127,128} The number of deaths is highly unequal, with far more deaths at earlier ages in low-income countries and Sub-Saharan Africa.¹²⁷ If all countries were to achieve the Sustainable Development Goal of Under 5 Mortality Rate <25 deaths/1000 by 2030, from the year 2015 this would avert 12.8 million deaths.¹²⁹ From 2000-2017, if all units had an Under 5 Mortality Rate that matched the best performing unit in each respective country, this would have averted 58% of deaths in those under 5 years, that is, 71.8 (68.5 to 74.9) million deaths.¹³⁰ A realistic projection was that if the pandemic takes 5 years for “full cycling”, 60% of the global population is infected, and the IFR is 0.19%, COVID-19 will account for 2.9% of global deaths. If only 10% of the high-risk population are infected, COVID-19 will account for 0.6% of global deaths over 5-years.⁹⁵

Some causes of death in the world are given in Table 5; COVID-19 deaths (~3500/day up to September 4, 2020) are also shown.¹³¹⁻¹⁴³ For example, there are an estimated 4110 deaths/day from Tuberculosis,¹³³ 3699 deaths/day from motor vehicle collisions,¹³¹ 21,918 deaths/day due to use of tobacco,¹³² >3400 deaths/day from Under 5 cases of pneumonia or diarrhea,^{137,138} and 30,137 deaths per day from dietary risk factors.¹³⁹ The WHO has estimated that if all people would adopt a vegan diet this would avert 13.7 M (95% CI 7.9, 19.4) deaths by 2030.⁸⁴ Some of these deaths are preventable if we were to take appropriate action, and some we as a society have decided we are willing to accept in trade-off for our freedom and wellbeing.

4. An Informed Cost-Benefit Analysis of Lockdowns

4.1 The Corona Dilemma

The economist Paul Frijters has asked us to consider “The Corona Dilemma” (Figure 1a and 1b) modelled after the so-called “Trolley Problem” in philosophy.¹⁴⁴ He asks us to imagine “you are the decision maker who can pull the lever on the train tracks to avoid the coming train from going straight.”¹⁴⁴ Our options are to divert the train or not. “If you do not divert the train – you are letting the virus rage unchecked [i.e., COVID-19 deaths].”¹⁴⁴ On the other hand, “if you pull the lever – the diverted train will put whole countries into isolation, destroying many international industries and thus affecting the livelihood of billions, which through reduced government services and general prosperity will cost tens of millions of lives [i.e., COVID-19 reaction].”¹⁴⁴ The world pulled the lever, and the unintended health consequences of these measures did not play a part in modelling or policy.

4.2 Cost-Benefit Analysis

Rethinking the Lockdown Groupthink

Medical and Public Health experts are not expert in this type of analysis.^{18,19} Health resources are finite. We all take health risks to ensure a better future for ourselves, family, children, and society. “Wellbeing of the population is the ultimate goal of government.”^{145,146} To compare outcomes of policies we need a common single metric of measurement to weigh trade-offs and make rational decisions. The goal is to maximize the sum of years lived by the population,⁵² weighted by the health quality of those years [i.e., Quality Adjusted Life Years, QALY] or the wellbeing quality of those years [i.e., Wellbeing Years, WELLBY]. The QALY misses some important things that are valued by individuals, including joy, status, and things that give fulfillment like jobs. The WELLBY measures the value of anything that makes life enjoyable, and captures almost everything that is important to people. It is measured by life satisfaction, asking “overall, how satisfied are you with your life nowadays?” and rated on a Likert Scale from 0 [“not at all”] to 10 [“completely”]; the usual healthy level is ‘8’, and those indifferent between living on or not at all score ‘2’ – 1 regular year of happy life (1 QALY) is worth 6 WELLBY.^{145,146} Despite some limitations, cost and benefit should be measured in terms of human welfare in the form of length, quality, and wellbeing of lives, and “to make no assessment is just to make policy in a vacuum.”¹⁴⁷

First, consider the benefits of lockdown, preventing COVID-19 deaths. Using the age distribution of deaths and comorbidities, in the UK the average person who died due to COVID-19 had 3-5 healthy years left to live; that is, 3-5 QALY, or 18-30 WELLBY.^{95,144,147} This number was even lower in Italy.¹⁴⁴ We can calculate that lockdowns ‘saved’: 50% infected to herd immunity X 0.3% IFR X 7.8 Billion people X 5 QALY lost per death = 11.7 million deaths, 58.5 million QALY, or 360 million WELLBY. The number is likely much lower than this for several reasons: it is likely <40% to herd immunity, the IFR is likely <0.24%, some deaths would occur even with lockdowns [that might prevent at most 70% of deaths; in Sweden it was estimated lockdown could have prevented one-third of deaths],¹⁴⁸ with focus on retirement and nursing homes we might avoid many of the excess deaths, and we cannot stay locked down forever [if no ‘exit strategy’ exists, then lockdown is not really a ‘strategy’¹⁰]. A more realistic number is at least 2X lower, well fewer than 5.2 million deaths ‘saved’. It is also worth mentioning that the efficacy of lockdown has been questioned in several studies, reducing the benefit of lockdown potentially markedly further (ETable 3, see Additional file 1).¹⁴⁹⁻¹⁵⁵

Second, consider the costs of lockdown.^{144,156-158} An important point must be made here. We are not comparing COVID-19 deaths vs. economy as prosperity. Rather, it is COVID-19 deaths vs. recession deaths – it’s lives versus lives, as the economy is about lives. “It’s horrible either way... [we’re] advocating for the least people to die as possible.”¹⁵⁹

Expected costs of the recession in lives can be calculated based on two methods. One uses historical evidence of a strong long-run relation between government spending [economic development] and life expectancy.^{144,156-158} Government expenditures on healthcare, education, roads, sanitation, housing, nutrition, vaccines, safety, social security nets, clean energy, and other services determines the population wellbeing and life-expectancy.¹⁴⁴ If the public system is forced to spend less money on our children’s future, there are statistical lives lost [people will die in the years to come]. The social determinants of health, including conditions of early childhood, education, work, social circumstances of elders, community resilience (transportation, housing, security), and fairness (economic security) determine lifespan.¹⁶⁰ As a general rule, US\$10K/year GDP buys an additional 10 years of life, so in a life of 75 years, US\$750K buys 10 years in life expectancy = US\$75K/QALY.^{144,156-158} This is a maximum cost; in India US\$25K/QALY is appropriate [most effect occurs for vulnerable and marginalized groups].¹⁴⁴ The other method is based on government numbers that are used to estimate how much health and life expenditures buy. Since the lockdown is a government public health policy, “it is saving lives which is what the lockdown was for... we are treating decisions on how to face COVID-19 in the same way as

Rethinking the Lockdown Groupthink

decisions... are made about resources to apply to the treatment of cancer, heart disease, dementia, and diabetes.”¹⁴⁷ Based on research on how costly it is to save people from illness (how government services maintain health), in the UK it is US\$20K/QALY, and using consumer willingness to pay it is US\$80K/QALY.¹⁴⁴⁻¹⁴⁶ This again is a maximum cost, as this is for Western countries, who are at least 3X wealthier than the average country in the world; you can save a life in poor countries with US\$2-3K, and lives are saved more cheaply with the first few billions spent.^{144,161} It is estimated that in 2020-2021 the world economy will shrink by at least US\$8-9 trillion (about 6% of GDP), and this will take many years to recover (Figure 2).^{144,156,157,162,163} The loss in terms of GDP will be “easily US\$50 trillion over the coming decade”,^{144,156} with lockdowns ordering businesses and workplaces to stop functioning, ports closed, business bankruptcies, and resultant disrupted supply and demand chains.^{64,164,165} We can calculate that the recession resulting from lockdowns ‘cost’: US\$50 trillion X 40% as government expenditure ÷ US\$100K/QALY = 200 million QALY, or 1.2 billion WELLBY. This is an underestimate, and the actual figure is likely at least 12X higher for several reasons: the number US\$100K/QALY was used when it is far less than this for half the world population residing in low-income countries and may be much lower even in high-income countries, and a conservative estimate of world GDP loss during the pandemic was used, particularly if there is another prolonged period of lockdown.

Another cost of lockdown is the loneliness and anxiety effect on individuals. It is estimated that loneliness from isolation costs 0.5 WELLBY/person/year.^{145,146} If lockdowns last for 2 months to 4 billion people, this results in a cost of 333 million WELLBY.¹⁵⁶ The cost is likely far higher, as this assumes only 2 months of lockdown, and does not include the effect of loneliness on life-span (i.e., early mortality) and disease that occurs particularly to young people.¹⁶⁶⁻¹⁷²

The last cost considered here is the effect of unemployment. It is estimated that unemployment costs 0.7 WELLBY/unemployed person/year.^{145,146} Since it is estimated there will be 400 million additional unemployment years due to the lockdowns, the cost is 280 million WELLBY/year.^{156,173} The cost is likely at least 3X higher, as recovery from unemployment will occur over several years, we do not consider the effect on wellbeing to the families of the unemployed, and we do not consider the effect on deaths of despair in young people or on loss of health insurance.

The effects of loneliness and unemployment on life-expectancy are not considered in the costs above, only the loss of life-satisfaction in WELLBYs. Recent literature has summarized the major effect of individual income, social network index (i.e., integration in a social network), and adverse childhood experiences on life-span, early mortality, risk of chronic diseases (including heart disease, diabetes, kidney disease, stroke, cancer, lung disease, Alzheimer’s, substance use, depression), and suicide rates.¹⁶⁶⁻¹⁷² Recent financial difficulties, history of unemployment, lower life satisfaction, and history of food insecurity are associated with mortality in the United States.¹⁶⁷ Actual or perceived social isolation is one of the top 3 risk factors for death due to cardiovascular disease, increases risk of death in the next decade by 25-30%, and “risks creating cohorts of individuals who are less socially functional.”^{168,174} Unemployment is associated with a mean adjusted hazard ratio for mortality of 1.63.¹⁷⁵ Life stress is associated with development and exacerbation of asthma, rheumatoid arthritis, anxiety disorders, depression, cardiovascular disease, chronic pain, HIV/AIDS, stroke, certain types of cancer, and premature mortality.¹⁷⁶ Especially concerning are the effects on children during “the early years” of life, increasingly recognized as the period of greatest vulnerability to, and greatest return on investment from, preventing adverse long-term outcomes that can have lasting and profound impacts on future quality of life, education, earning potential, lifespan, and healthcare utilization.¹⁶⁹⁻¹⁷² The early years of life are a critical period when a child’s brain develops from social interaction and experiences, thus providing the foundation for their entire future life potential. During the pandemic children are being

Rethinking the Lockdown Groupthink

exposed to increased intimate partner violence, family financial crises, disrupted education, an increasing achievement gap (i.e., low-income families who do not have access to computer, internet, space, food, and parental support cannot participate in online learning), loneliness, physical inactivity, lack of support services (e.g., school lunches, access to early childhood services and aids for those with disability), etc.^{87,88,104,107,177-179} These adverse childhood experiences have permanent impacts that cannot be compensated for by later improvements in social situations.

The cost-benefit analysis is shown in Table 6, finding on balance the lockdowns cost a minimum of 5X more WELLBY than they save, and more realistically, cost 50-87X more. Importantly, this cost does *not* include the collateral damage discussed above [from disrupted healthcare services, disrupted education, famine, social unrest, violence, and suicide] nor the major effect of loneliness and unemployment on lifespan and disease. Frijters and Krekel have estimated that “the [infection] fatality rate should be about 7.8% to break-even and make a radical containment and eradication policy worthwhile, presuming that would actually eliminate the disease.”¹⁸⁰ A similar cost-benefit analysis for Canada is shown in ETable 4 (see Additional file 1), with the cost at least 10X higher for lockdowns than the benefit. A different analysis for Australia is shown in Table 7, estimating the minimum cost is 6.6X higher than the benefit of lockdown.^{181,182} Another cost-benefit analysis for the UK used National Institute for Health and Care Excellence guidelines for resource decisions, that 1 QALY should cost no more than US\$38.4K. Assuming lockdown could save up to 440K people [although more likely at most: 66.65 million population X 40% to herd immunity X 0.24% IFR = 64K people] of 5 QALY each, and a minimum GDP loss of 9% [i.e., assuming lost output comes back quickly, and not including any health costs of unemployment or disrupted education], “the economic costs of the lockdown... is far larger than annual total expenditure on the UK national health service... the benefits of that level of resources applied to health... would be expected to generate far more lives saved than is plausibly attributable to the lockdown in the UK... The cost per QALY saved of the lockdown looks to be far in excess... (often by a factor of 10 and more) of that considered acceptable for health treatments in the UK.”¹⁴⁷ The authors estimated the benefit of easing restrictions for over the next 3 months outweighs the cost by 7.3-14.6X.¹⁴⁷ “A cost-benefit analysis of 5 extra days at COVID-19 alert level 4” for New Zealand found that the cost in QALY was 94.9X higher than the benefit.¹⁸³ Finally, a cost-benefit analysis for the US is shown in Table 8, finding the cost of lockdown would be at least 5.2X the benefit.^{184,185}

4.3 Objection: the economic recession would happen without lockdown

This is unlikely, particularly if the fear is appropriately controlled with clear communication on risk, numbers with denominators and context, and important trade-offs, as this information becomes available. The resources and attention should be directed towards protecting the most vulnerable (i.e., the elderly). The evidence for policy impact on total human welfare should be based on a wide range of expertise, including economists, and not only health experts. The CIDRAP group published suggestions for communication during a crisis, which included advice to not over-reassure (i.e., be realistic about the course post-lockdown – cases and deaths will climb), to express uncertainty (i.e., explain the difficult dilemmas and trade-offs, and why we choose which course; explain that the initial reaction was temporary, buying time to figure out next steps); to validate emotions (i.e., admit waves of disease will occur and there may be economic devastation); and to admit and apologize for errors (i.e., we must resurrect a devastated economy in order to save lives).¹⁸⁶

The severity of mandated lockdowns was directly linked with the severity of the economic collapse.^{147,181,187-191} These were direct commands to halt work, restrict travel, restrict the number of people inside dwellings, close factory floors, stay at home, etc. Economic activity, GDP loss, and

Rethinking the Lockdown Groupthink

unemployment were temporally, within weeks, related to lockdown orders.¹⁸¹ There was a dramatic decline in employment, consumer spending, and economic outcomes largely accounted for by different degrees of restrictions in different countries.^{181,188,189} The consensus, for example by the Bank of England, the Reserve Bank of Australia, the Organization for Economic Co-operation and Development, the International Monetary Fund (e.g., the “calamitous Great Lockdown”), and the Chief Medical Officer of Health in Canada (e.g., “the extensive slowdown in the Canadian economy as a result of public health emergency measures” on p. 29), is that the economic recession is a result of the lockdowns.^{45,117,190,191,192}

4.4 Objection: consider the ‘long-haulers’

The long-term effects of COVID-19 illness need to be studied and clarified. Much of the current information is based on anecdotes (i.e., single cases) in the press. It may be expected that survivors of ARDS due to COVID-19 will have significant quality of life sequelae similar to ICU survivors from other causes of ARDS, or even lower given the lower cytokine levels in COVID-19.^{193,194} It may also be expected that some survivors of COVID-19 that did not require hospitalization will have significant lingering symptoms for months similar to what occurs with other causes of community acquired pneumonia.¹⁹⁵ The few studies reported to date do not well quantify the severity and duration of long-term symptoms such as fatigue, breathlessness, ‘foggy thinking’, etc., making it difficult to interpret the impact on cost-benefit analyses.¹⁹⁶⁻²⁰⁰ The highest rates of ‘long-COVID-19’ are from crowdsourced online data where there is likely a strong selection bias in participation.²⁰¹⁻²⁰³ In addition, most of these reports do not compare to contemporary controls during the pandemic, controls who are often experiencing social isolation, unemployment, and loneliness. For example, one survey of people without COVID-19 in the United States found a high prevalence of anxiety (25.5%), depressive (24.3%), and trauma and stressor related (26.3%) disorders, with 13.3% who started or increased substance use to cope, and 10.7% who seriously contemplated suicide in the last 30 days.²⁰⁴ The Household Pulse Survey in the US found that in 2019 11% of adults had symptoms of anxiety or depressive disorder, while in April-August 2020 35-40% did.²⁰⁵ Another survey in US adults found the prevalence of depression symptoms was more than 3-fold higher during COVID-19 than before, and worse for those with lower social and economic resources.²⁰⁶ A survey in Australia found worse exercise (47.1%), mental wellbeing (41%), weight gain (38.9%), screen time (40-50%), and life satisfaction (down by an average of 13.9%) during the pandemic.²⁰⁷ In Canada, 57% of children 15-17 years old reported their mental health was “somewhat worse” or “much worse” than it was prior to physical distancing measures during the pandemic, and Canadians ≥15 years old had a 23% decrease in reported “excellent or very good self-perceived mental health”.^{177,208} Although there will likely be many ‘long-haulers’, the incidence, severity, and duration of long-term symptoms would need to be very high to change the cost-benefit balance. Given that at a generous minimum the cost-benefit balance is at least 5X against lockdowns, the sequelae of COVID-19 would need to cost well over 200 million QALY worldwide, and likely >10X that number, to make the cost-benefit analysis in need of reconsideration.

4.5 Objection: Low-income countries are particularly susceptible and need protection

The Imperial College COVID-19 Response Team modeled the effect on low-income countries.²⁰⁹ These countries were hypothesized to be more susceptible to COVID-19 deaths, even with markedly lower population over age 65 years (about 3%), due to several factors: larger size of households [i.e., more homogeneous contact patterns], far fewer hospital and ICU beds, lower quality of health care, and unique co-morbidities [e.g., HIV in >1%, tuberculosis in >25%, and malnutrition in >30% of the population].²⁰⁹ For suppression to have benefit, it was estimated to need to be in force 77% of the time [compared to 66% in high-income countries] over the 18 months of modeling [and “well beyond the

Rethinking the Lockdown Groupthink

time window of our simulations”].²⁰⁹ However, modeling inputs were overestimated, with >90% of the population infected, and baseline IFR at in high-income countries 1.03%. Moreover, low-income countries are more vulnerable to lockdown adverse effects for several reasons: lower ability to work from home, more household based transmission (when confined to home), economic vulnerability [a higher degree of informal labor markets, and marginal capacity to provide support for ensuring livelihoods], slower build-up of herd immunity [given limited health care capacity], little testing capacity, wider health risks from diverting all attention to a single disease, and future health system failure once suppression measures are lifted (also see Table 1).^{209,210} The effects of a recession on government spending is magnified when this spending was already insufficient to improve the social determinants of health. In India, the desperation is leading to an increase in child trafficking.²¹¹ Surveys in Africa indicate a very low IFR; for example, in Kenyan blood donors 5% were seropositive yet the country reported only 100 deaths, in Bantyre, Malawi, a serosurvey found 12.3% of healthcare workers were seropositive yet only 17 deaths were reported, and in two cities in Mozambique seropositivity was 3% and 10% yet only 16 deaths were reported.²¹² It is extremely likely the cost-benefit analysis is even more against lockdown in low-income countries for these reasons.

5. Discussion:

5.1 What to do now: change the trolley track

5.1.1 Other calls for a change in response priorities

Several other groups and individuals have made calls for a change in COVID-19 response priorities (Table 9).²¹³⁻²²⁰ In an open letter on July 6, 2020, to the Prime Minister and Premiers of Canada signed by many former deputy ministers of health, chief public health officers, and medical deans, the authors called for “A Balanced Response.”²¹³ They write that the current approach “carries significant risks to overall population health and threatens to increase inequalities... Aiming to prevent or contain every case of COVID-19 is simply no longer sustainable...”²¹³ In an open letter to the National Cabinet in Australia signed by many economists and medical experts with the Australian Institute for Progress, the authors make similar points.²¹⁴ They write that “to analyze the COVID-19 effect it is necessary to understand it as shortening life. But the lockdowns and the panic have also had a cost in shortening life for others.”²¹⁴ Ioannidis called for evidence to guide policy, noting many of the collateral and recession effects discussed above.²¹⁵⁻²¹⁹ “Shutdowns are an extreme measure. We know very well that they cause tremendous harm.”²¹⁶ A resignation letter by an economist in the Australian Treasury wrote that “the pandemic policies being pursued in Australia... are having hugely adverse economic, social and health effects... The need for good policy process does not disappear just because we face a public health crisis...”²²⁰ The “Great Barrington Declaration” written on October 4, 2020, by infectious disease epidemiologists and public health scientists recommends “Focused Protection.”²²¹ The declaration writes that “current lockdown policies are producing devastating effects on short and long-term public health... leading to greater excess mortality in years to come...”²²¹

A caveat to quoting these open letters is that “petitions cannot and should not be used to prove that the positions of the signatories are scientifically correct,” as this would be based on the fallacies of ‘argument ad populum’ and ‘invoking authority’, and have other drawbacks.²²² These open letters are used only to show that many have expressed views similar to those expressed here, and this might open the door to serious consideration of the empirical evidence and arguments presented above.

5.1.2 Objection: Herd Immunity Is a Dangerous Idea

Rethinking the Lockdown Groupthink

There are several objections that have been made to the idea of opening up society to achieve natural herd immunity.²²³⁻²²⁶

First, an objection is that natural herd immunity assumes the immunity is long lasting, and this may not be the case.²²³⁻²²⁶ If immunity is short-lived, then COVID-19 may become an endemic and likely yearly viral infection as predicted by Kissler.² In the event of short-lived immunity it will still be important to achieve natural herd immunity to protect the high-risk groups (i.e., the elderly) now and yearly (until a vaccine is widely available) without recurrent and prolonged lockdowns that devastate the economy and thus population life-expectancy and wellbeing. Notably, if immunity is not long-lasting this will be a problem for possible vaccine induced herd immunity as well, as the world population will need vaccines to be produced and delivered everywhere at least each year.

Second, another objection is that the costs in deaths, mental and physical health and suffering, socioeconomic inequities, and harming the economy will be too high.^{223,224} This objection ignores the discussion above of the trade-offs involved that include not only COVID-19 direct effects, but also indirect effects of the response to COVID-19, the collateral damage and cost-benefit analysis where it was shown that the costs of all these effects is in fact much higher with lockdowns.

Third is the objection that uncontrolled transmission in younger people would inevitably result in infections in high-risk groups with high mortality.²²³⁻²²⁶ The ability to successfully shield continuing care facilities and hospitals from COVID-19 is questioned.^{223,224} Prolonged isolation of high-risk groups is said to be “unethical”.²²³ The objection is odd, as if we cannot protect those in nursing homes nor hospitals, why are we using personal protective equipment at all? In addition, prolonged isolation of *all* groups is what has occurred now, and based on the cost-benefit analysis this is what is unethical by causing far more harm to all, including the high-risk elderly. Of course, infection *can* still spread to high-mortality populations; however, the goal is to reduce this risk. Moreover, <10% of the population is at high-risk, accounting for >90% of potential deaths; surely we can focus on protecting this subgroup of people.²¹⁹ Monitoring in Europe shows that despite increasing COVID-19 cases, excess mortality has only shown a slight increase, suggesting protection of the most vulnerable may be feasible.²²⁷ Modelling has also suggested that social distancing of those over 70 years of age would prevent more deaths than a fixed duration of social distancing of the entire population.²²⁸

Fourth is the objection that healthcare systems will be overwhelmed by uncontrolled spread.^{223,224} This is a worrisome possibility, as health-care providers may be forced to make painful rationing decisions. If a healthcare system is overwhelmed, the effects would have to be extreme to make the benefit of lockdowns to save ICU capacity comparable to the long-term costs. There are several ways to minimize this possibility, including a focus on protecting those at high-risk (see below), information dissemination to cause fast awareness of voluntary sensible self-imposed use of handwashing and (in crowded areas) masks,^{229,230} limiting very large gatherings, and expanding critical care capacity when necessary. Forecasting of healthcare capacity needs in the short or medium term, even when built directly on data and for next day predictions, has consistently failed, and most healthcare systems were not overwhelmed despite sometimes being stressed with high peaks of cases.^{219,231} Forecasting failure led to elderly patients being discharged to nursing homes (where there was high mortality), and largely empty wards (unnecessarily affecting hospital utilization for other serious conditions); in Canada “overall ICU occupancy rates did not exceed 65% (p. 12)”.^{45,219} Lockdowns in anticipation of forecast healthcare incapacity should not be done, especially if based on forecasting that is not released for public scrutiny nor repeatedly fit to real-time data to verify accuracy. In addition, if there are insufficient ICU beds for

Rethinking the Lockdown Groupthink

the population due to underfunding, the effects of the recession on government healthcare spending in the future will markedly adversely worsen this situation in the long-term.

Fifth is the objection that natural herd immunity is not achievable.²²³⁻²²⁶ This is based on the few case reports of re-infection, the Brazilian city of Manaus where seroprevalence was up to 66% yet there is currently a resurgence of COVID-19 cases, and the claim that natural herd-immunity has never occurred. The seven published case reports of re-infection, four with symptoms [one requiring hospitalization, and one death in an immunocompromised 89 year old with few details reported], when 10% of the world population has likely been infected over the past 10 months cannot yet provide evidence that severe reinfection and contagion is at all common.²³²⁻²³⁷ Regarding Manaus, the high seroprevalence likely reflected the special situation of a relatively homogeneous cohort of people in overcrowded low socioeconomic urban situations, with reliance on crowded long riverboat travel; now there seems to be a different demographic cohort of young wealthy individuals being exposed.²³⁸⁻²⁴⁰ In addition, the peak seroprevalence in blood donors in Manaus was 51.8% in June, while another study of household seroprevalence in Manaus on May 14-21 found this to be 12.7% [the respective numbers for Sao Paulo were closer, at 6.9% and 3.3% in the two serosurveys].^{240,241} Even correcting for a possible lower sensitivity of capillary blood used in the household survey does not explain the difference, as the corrected seroprevalence might be up to 19.3%.²⁴² Regarding historical natural herd-immunity, it is likely that this was achieved for several infections, with outbreaks that occurred as births added sufficient numbers of new susceptible young individuals (e.g., for Measles, Mumps, Rubella).

Finally, an important point to emphasize is that the information in this review does *not* depend on natural herd immunity being achieved. The collateral damage, and the cost-benefit analysis showed that lockdowns are far more harmful than a risk-tailored population specific response. "Public health is the science and action of promoting health, preventing disease, and prolonging life... ensuring that Canadians can live healthy and happier lives (p. 59-60);"⁴⁵ some suggestions for how to do this is discussed below.

5.1.3 Some suggestions: What can we do?

5.1.3.1. Focus on protecting those at high risk: A risk-tailored, population-specific response.²⁴³ This starts with better public understanding of the risks and trade-offs involved.¹⁸⁶ Protection should focus on high-risk groups: those hospitalized [e.g., prevent nosocomial infection],²¹⁶ in nursing homes [e.g., staff work in only one facility, adequate personal protective equipment supply, more staff, equitable pay],²⁴⁴ prisons, homeless shelters, and certain demographics [e.g., age ≥ 70 years, those with multiple severe co-morbidities].²⁴³ There should be investment in improving the social determinants of health [e.g., "invest in strategies that address health inequities and better serve the elderly, people experiencing homelessness, and those living with limited means"²⁴³].^{45,160,245} Don't lock everyone down, regardless of their individual risk, as this will cause more harm than benefit.²¹⁶ It is not true that "no one is protected until everyone is protected."⁴⁵

5.1.3.2. Open schools for children:^{87,246} School provides essential educational, social, and developmental benefits to children.²⁴⁷ Children have very low morbidity and mortality from COVID-19,¹⁷⁴ and, especially those ≤ 10 years old, are less likely to be infected by SARS-CoV-2^{57,249-251} and have a low likelihood to be the source of transmission of SARS-CoV-2.^{178,252} Children account for 1.9% of confirmed cases worldwide.²⁴⁸ School closures don't seem to have an impact on community outbreaks.^{178,253} Modelling predicted that school and university closures and isolation of younger people would increase the total number of deaths [postponed to a second and subsequent waves].²²⁸ Modelling also predicted that

Rethinking the Lockdown Groupthink

school closures alone would prevent only 2-4% of deaths.²⁵⁴ We need to educate parents and teachers regarding their low risk, and focus teachers with greater vulnerability due to age or multiple co-morbidity on remote learning. Until schools open, education is lacking especially for those with the fewest opportunities, worsening social disparities that education systems are intended to level. Similarly, allow visitation in children's hospitals and pediatric long-term care facilities, where the risk even with co-morbidities is so low as to not warrant the tragedy of sacrificing our most vulnerable in the false hope of protecting them.^{43,48,49,178}

5.1.3.3. Build back better: Maybe we have learned that the “government can intervene decisively once the scale of an emergency is [or seems] clear and public support is present.”²⁵⁵ Maybe we can “recalibrate our sense of omnipotence seeing the ability of ‘natural’ forces to shock the global economy.”²⁵⁵ Maybe we can tip “energy and industrial systems towards newer, cleaner, and ultimately cheaper modes of production that become impossible to outcompete.”²⁵⁵ This would involve investment in clean technologies [e.g., renewable energy, green construction, natural capital, carbon capture and storage technologies], and conditional [on measurable transition] bailouts. This is because climate change, like the COVID-19 response, will involve market failures, externalities, international cooperation, and political leadership: the devastation is just in slow motion and far graver. The aggregate fiscal stimuli aimed at alleviating the consequences of the COVID-19 crisis for 149 countries amount to US\$12.2 trillion.²⁵⁶ Climate experts have estimated that “the additional investment needed to shift low-carbon energy investment onto a Paris-compatible pathway thus amounts to about US\$300 billion per year globally over the coming 5 years... 12% [of total pledged stimulus to date] when considered over the entire 2020-2024 period....”²⁵⁶ Moreover, “subtracting divestments from high-carbon fossil fuels... indicates that the overall increase in net annual investments to achieve an ambitious low-carbon transformation in the energy sector are notably small... 1% [of the total announced stimulus to date] over the 2020-2024 period.”²⁵⁶ A green recovery may be a driver of employment, spur innovation and diffusion of technologies, reduce stranded assets, and result in a more sustainable and resilient society.^{117,256}

5.2. Some Research Priorities

More information will help to optimize responses to the pandemic. This particularly applies to possible prevention, prophylaxis, and treatment of COVID-19. How effective cloth masks are at preventing infection, or at reducing severity of infection needs more study.^{257,258} The safety, efficacy, and durability of protection from vaccines, particularly in high-risk groups, must be determined in large Phase III randomized controlled trials.²⁵⁹ Novel treatments are in clinical trials, with dexamethasone having benefit on mortality in those with severe COVID-19 requiring oxygen treatment.²⁶⁰ Research is also required to determine the frequency and severity of reinfections.²⁶¹ The frequency, duration, and severity of ‘long-COVID’ requires better study. The impact of influenza on COVID-19 morbidity and mortality requires study, as both viruses may compete for the same susceptible individuals.²⁶¹ Importantly, research on “the impending authoritarian pandemic... [the] toll being inflicted on democracy, civil liberties, fundamental freedoms, [and] healthcare ethics...” (e.g., due to those responses that were not strictly necessary nor proportionate, largely copied from the “authoritarian example of others”) is required to prevent regression and “erosion of rights-protective democratic ideals and institutions”²⁶² across the globe.²⁶²⁻²⁶⁴

6. Conclusion

Rethinking the Lockdown Groupthink

“The destruction of lives and livelihoods in the name of survival will haunt us for decades.”¹⁰ The decisions we made entailed “trade-offs that cannot be wished away.”¹⁰ The most affected by the pandemic response are “the poor, the marginalized, and the vulnerable,” while we in high-income countries have shifted “negative effects... to places where they are less visible and presumably less serious.”¹⁰ We must open up society to save many more lives than we can by attempting to avoid every case (or even most cases) of COVID-19. It is past time to take an effortful pause, calibrate our response to the true risk, make rational cost-benefit analyses of the trade-offs, and end the lockdown groupthink.

Abbreviations

COVID-19: Coronavirus Disease 2019

GDP: Gross Domestic Product

IFR: Infection Fatality Rate

ICU: Intensive Care Unit

NPI: Non-pharmaceutical Intervention

QALY: Quality Adjusted Life Years

SARS-CoV-2: Severe Acute Respiratory Syndrome Coronavirus 2

UK: United Kingdom

US: United States

WELLBY: Wellbeing Adjusted Life Years

Rethinking the Lockdown Groupthink

Declarations**Ethics approval and consent to participate:** Not applicable**Consent for publication:** Not applicable**Availability of data and materials:** All data generated or analyzed during this study are included in this published article (and its supplementary information file).**Competing interests:** The author declares that he has no competing interests.**Funding:** none**Author's contributions:** ARJ wrote the manuscript, and approved the final version.**Figure Titles and Legends****Figure 1(A).** The Trolley Dilemma using numbers compatible with the Corona Dilemma.

Legend: Modified with permission from Frijters P, reference 144.

Figure 1(B). The Corona Dilemma choices explicitly explained.

Legend: Modified with permission from Frijters P, reference 144.

Figure 2. Explanation of how acute GDP loss of 6-7% will accumulate over the decade to a loss of at least US\$50 trillion.

Legend: Reproduced with permission from Frijters P [Personal Communication].

Additional Files**Additional file 1.pdf****Title: ETables**

ETable 1. Total and COVID-19 deaths in the USA, as of August 22, 2020

ETable 2. COVID-19 deaths in Canada as of August 30, 2020 compared to deaths in 2018.

ETable 3. Studies suggesting that the efficacy of nonpharmaceutical interventions to prevent spread of COVID-19 are not as high as some predicted.

ETable 4. Cost-benefit analysis in WELLBYs for Canada's response to COVID-19.

Rethinking the Lockdown Groupthink

References

1. Kumar A, Qureshi S, Reynolds S, Light RB, Sligl W, Bates A, et al. Opinion: All levels of government must take decision, co-ordinated action now – before it's too late: a group of physicians trained in both infectious diseases and critical care medicine discuss what Canadian governments must do to prevent this country from finding itself in a similar situation to what Italy and Spain are experiencing. The National Post (March 17, 2020). <https://nationalpost.com/opinion/opinion-all-levels-of-government-must-take-decisive-co-ordinated-action-now-before-its-too-late>. [Accessed October 11, 2020].
2. Kissler SM, Tedijanto C, Goldstein E, Grad YH, Lipsitch M. Projecting the transmission dynamics of SARS-CoV-2 through the postpandemic period. Science (2020) 368:860-868.
3. Kissler SM, Tedijanto C, Goldstein E, Grad YH, Lipsitch M. Projecting the transmission dynamics of SARS-CoV-2 through the post-pandemic period. doi: <https://doi.org/10.1101/2020.03.04.20031112>. medRxiv [Preprint] (March 6, 2020). Available at: <https://www.medrxiv.org/content/10.1101/2020.03.04.20031112v1> [Accessed October 11, 2020].
4. Kissler SM, Tedijanto C, Lipsitch M, Grad Y. Social distancing strategies for curbing the COVID-19 epidemic. Doi: <https://doi.org/10.1101/2020.03.22.20041079> medRxiv [Preprint] (March 24, 2020). Available at: <https://www.medrxiv.org/content/10.1101/2020.03.22.20041079v1> [Accessed October 11, 2020].
5. Ferguson NM, Laydon D, Nedjati-Gilani G, Imai N, Ainslie K, Baguelin M, et al., on behalf of the Imperial College COVID-19 Response Team. Report 9: Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand. (16 March 2020). Available at: <https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/covid-19/report-9-impact-of-npis-on-covid-19/> [Accessed October 11, 2020].
6. Walker PGT, Whittaker C, Watson O, Baguelin M, Ainslie KEC, Bhatia S, et al., on behalf of the Imperial College COVID-19 Response Team. Report 12: The global impact of COVID-19 and strategies for mitigation and suppression. (26 March 2020). Available at: <https://www.imperial.ac.uk/media/imperial-college/medicine/sph/ide/gida-fellowships/Imperial-College-COVID19-Global-Impact-26-03-2020v2.pdf> [Accessed October 11, 2020].
7. Flaxman S, Mishra S, Gandy A, Unwin HJT, Mellan TA, Coupland H, et al. Estimating the effects of non-pharmaceutical interventions on COVID-19 in Europe. Nature (2020) 584:257-261.
8. Hsiang S, Allen D, Annan-Phan S, Bell K, Bolliger I, Chong T, et al. The effect of large-scale anti-contagion policies on the COVID-19 pandemic. Nature (2020) 584:262-267.
9. Frijters P. What kind of crowd are we now seeing? The 5 surprises in this pandemic. Club Troppo (June 17, 2020). Available at: <https://clubtrotto.com.au/2020/06/17/what-kind-of-crowd-are-we-now-seeing-the-5-surprises-in-this-pandemic/> [Accessed October 11, 2020].
10. Caduff C. What went wrong: Corona and the world after the full stop. Medical Anthropology Quarterly (2020) In Press. doi: 10.1111/maq.12599. Available at: <https://anthrosource.onlinelibrary.wiley.com/doi/epdf/10.1111/maq.12599> [Accessed October 11, 2020].
11. Ogbodo JN, Onwe EC, Chukwu J, Nwasum CJ, Nwakpu ES, Nwankwo SU, et al. Communicating health crisis: a content analysis of global media framing of COVID-19. Health Promotion Perspectives (2020) 10(3):257-269.
12. Schippers MC. For the greater good? The devastating ripple effects of the Covid-19 crisis. Front Psychol (2020) 11:577740. DOI: 10.3389/fpsyg.2020.577740.
13. Wicke P, Bolognesi MM. Framing COVID-19: how we conceptualize and discuss the pandemic on Twitter. PLoS One (2020) 15(9):e0240010
14. Yam KC, Jackson JC, Barnes CM, Lau J, Qin X, Lee HY. The rise of COVID-19 cases is associated with support for world leaders. PNAS (2020) 117(41):25429-25433.

Rethinking the Lockdown Groupthink

15. Sebhatu A, Wennberg K, Arora-Jonsson S, Lindberg SI. Explaining the homogeneous diffusion of COVID-19 nonpharmaceutical interventions across heterogeneous countries. *PNAS* (2020) 117(35):21201-21208.
16. Irvine J. Are the costs of lockdown worth the pain? Economists weigh in. *The Sydney Morning Herald* (August 8 2020). Available at: <https://www.smh.com.au/business/the-economy/are-the-costs-of-lockdown-worth-the-pain-economists-weigh-in-20200807-p55jpk.html> [Accessed October 11, 2020].
17. World Health Organization. Non-pharmaceutical public health measures for mitigating the risk and impact of epidemic and pandemic influenza. (2019) Available at: <https://apps.who.int/iris/bitstream/handle/10665/329438/9789241516839-eng.pdf?ua=1> [Accessed October 11, 2020].
18. Bonneux L, Van Damme W. Health is more than influenza. *Bulletin World Health Organization* (2011) 89:539-540.
19. Bonneux L, Van Damme W. Preventing iatrogenic pandemics of panic. Do it in a NICE way. *BMJ* (2010) 340:c3065.
20. Halpern SD, Truog RD, Miller FG. Cognitive bias and public health policy during the COVID-19 pandemic. *JAMA* (2020) 324:337-338.
21. Halpern SD, Miller FG. The urge to build more intensive care unit beds and ventilators: intuitive but errant. *Ann Internal Med* (2020) 173:302-303.
22. Singer P, Plant M. When will the pandemic cure be worse than the disease? *Project Syndicate* (April 6, 2020). Available at: <https://www.project-syndicate.org/commentary/when-will-lockdowns-be-worse-than-covid19-by-peter-singer-and-michael-plant-2020-04?barrier=accesspaylog> [Accessed 11 October 2020].
23. Brooks B, Curnin S, Owen C, Bearman C. Managing cognitive biases during disaster response: the development of an aide memoire. *Cognition Technology & Work* (2020) 22:249-261.
24. Schippers MC, Van Jaarsveld GM. Optimizing decision-making processes in times of Covid-19: using reflexivity to counteract information processing failures. *SSRN [Preprint]* (May 15, 2020). Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3599939 [Accessed October 31, 2020].
25. Restrepo D, Armstrong KA, Metlay JP. Annals clinical decision making: avoiding cognitive errors in clinical decision making. *Ann Internal Med* (2020) 172(11):747-751.
26. Ioannidis JPA. Infection fatality rate of COVID-19 inferred from seroprevalence data. *Bulletin World Health Organization* (2020) In Press. Available online: https://www.who.int/bulletin/online_first/BLT.20.265892.pdf [Accessed October 26, 2020]
27. Claus P. Up to 300 million people may be infected by Covid-19, Stanford Guru John Ioannidis says. *Greek USA Reporter* (June 27, 2020). Available at: <https://usa.greekreporter.com/2020/06/27/up-to-300-million-people-may-be-infected-by-covid-19-stanford-guru-john-ioannidis-says/> [Accessed October 11, 2020].
28. DW News. Coronavirus: WHO estimates 10% of global population infected with COVID-19. (October 5, 2020). Available at: <https://www.dw.com/en/coronavirus-who-estimates-10-of-global-population-infected-with-covid-19/a-55162783> [Accessed October 26, 2020].
29. Long QX, Tang XJ, Shi QL, Li Q, Deng HJ, Yuan J, et al. Clinical and immunological assessment of asymptomatic SARS-CoV-2 infections. *Nature Medicine* (2020) 26(8):1200-1204.
30. Ibarrondo FJ, Fulcher JA, Goodman-Meza D, Elliott J, Hofmann C, Hausner MA, et al. Rapid decay of anti-SARS-CoV-2 antibodies in persons with mild Covid-19. *NEJM* (2020) 383:1085-1087.
31. Seow J, Graham C, Merrick B, Acors S, Steel KJA, Hemmings O, et al. Longitudinal evaluation and decline in antibody responses in SARS-CoV-2 infection. *medRxiv [Preprint]* (July 11, 2020). Available at: <https://www.medrxiv.org/content/10.1101/2020.07.09.20148429v1> [Accessed October 11, 2020].
32. Bastos ML, Tavaziva G, Abidi SK, Campbell JR, Haraoui LP, Johnston JC, et al. Diagnostic accuracy of serological tests for covid-19: systematic review and meta-analysis. *BMJ* (2020) 370:m2516.

Rethinking the Lockdown Groupthink

33. Robbiani DF, Gaebler C, Muecksch F, Lorenzi JCC, Wang Z, Cho A, et al. Convergent antibody responses to SARS-CoV-2 in convalescent individuals. *Nature* (2020) 584:437-442.
34. Burgess S, Ponsford MJ, Gill D. Are we underestimating seroprevalence of SARS-CoV-2? Current antibody tests fail to identify people who had mild infections. *BMJ* (2020) 370:m3364.
35. Prevost J, Gasser R, Beaudoin-Bussières G, Richard J, Duerr R, Laumaea A, et al. Cross-sectional evaluation of humoral responses against SARS-CoV-2 Spike. *Cell Reports Medicine* (2020) In Press. doi: <https://doi.org/10.1016/j.xcrm.2020.100126>.
36. Ward H, Cooke G, Atchison C, Whitaker M, Elliott J, Moshe M, et al. Declining prevalence of antibody positivity to SARS-CoV-2: a community study of 365,000 adults. *medRxiv* [Preprint] (October 27, 2020). Available at: <https://www.medrxiv.org/content/10.1101/2020.10.26.20219725v1> [Accessed October 30, 2020].
37. Faustini SE, Jossi SE, Perez-Toledo M, Shields A, Allen JD, Watanabe Y, et al. Detection of antibodies to the SARS-CoV-2 spike glycoprotein in both serum and saliva enhances detection of infection. *medRxiv* [Preprint] (June 18, 2020). DOI: <https://doi.org/10.1101/2020.06.16.20133025>. Available at: <https://www.medrxiv.org/content/10.1101/2020.06.16.20133025v1> [Accessed October 25, 2020].
38. Cervia C, Nilsson J, Zurbuchen Y, Valaperti A, Schreiner J, Wolfensberger A, et al. Systemic and mucosal antibody secretion specific to SARS-CoV-2 during mild versus severe COVID-19. *bioRxiv* [Preprint] (May 23, 2020). Available at: <https://www.biorxiv.org/content/10.1101/2020.05.21.108308v1> [Accessed October 11, 2020].
39. Gallais F, Velay A, Wendling MJ, Nazon C, Partisani M, Sibilia J, et al. Intrafamilial exposure to SARS-CoV-2 induces cellular immune response without seroconversion. *medRxiv* [Preprint] (June 22, 2020). Available at: <https://www.medrxiv.org/content/10.1101/2020.06.21.20132449v1> [Accessed October 11, 2020].
40. Sekine T, Perez-Potti A, Rivera-Ballesteros O, Stralin K, Gorin JP, Olsson A, et al., for the Karolinska COVID-19 Study Group. Robust T cell immunity in convalescent individuals with asymptomatic or mild COVID-19. *Cell* (2020) 183(1):158-168.e14.
41. Perez-Saez J, Lauer SA, Kaiser L, Regard S, Delaporte E, Guessous I, et al. Serology-informed estimates of SARS-CoV-2 infection fatality risk in Geneva, Switzerland. *Lancet Infect Dis* (2020) In Press. DOI: [https://doi.org/10.1016/S1473-3099\(20\)30584-3](https://doi.org/10.1016/S1473-3099(20)30584-3)
42. Salje H, Kiem CT, Lefrancq N, Courtejoie N, Bosetti P, Paireau J, et al. Estimating the burden of SARS-CoV-2 in France. *Science* (2020) 369:208-211.
43. Ioannidis JPA, Axford C, Contopoulos-Ioannidis DG. Population-level COVID-19 mortality risk for non-elderly individuals overall and for non-elderly individuals without underlying disease in pandemic epicenters. *Environmental Research* (2020) 188:109890.
44. Coletta A. Canada's nursing home crisis: 81 percent of coronavirus deaths are in long-term care facilities. *The Washington Post* (May 18, 2020). Available at: https://www.washingtonpost.com/world/the_americas/coronavirus-canada-long-term-care-nursing-homes/2020/05/18/01494ad4-947f-11ea-87a3-22d324235636_story.html [Accessed October 11, 2020].
45. The Chief Public Health Officer of Canada's Report on the State of Public Health in Canada 2020. From risk to resilience: an equity approach to COVID-19. Ottawa: Public Health Agency of Canada, 2020. Available at: <https://www.canada.ca/en/public-health/corporate/publications/chief-public-health-officer-reports-state-public-health-canada/from-risk-resilience-equity-approach-covid-19.html> [Accessed October 30, 2020].
46. Vossius C, Selbaek G, Benth JS, Bergh S. Mortality in nursing home residents: a longitudinal study over three years. *PLoS One* (2018) 13(9):e0203489.
47. McIntosh K. Coronaviruses. *UpToDate* (2020) Available at: <https://www.uptodate.com/contents/coronaviruses> [Accessed October 27 2020].

Rethinking the Lockdown Groupthink

48. Williamson EJ, Walker AJ, Bhaskaran K, Bacon S, Bates C, Morton CE, et al. Factors associated with COVID-19-related death using OpenSAFELY. *Nature* (2020) 584:430-436.
49. Erdman R, NcRae A, MacKay E, Hicks A, Norris C, Saini V, et al. COVID-19 Scientific Advisory Group Rapid Evidence Report. Topic: What risk factors (such as age, medical conditions, or lifestyle factors) are associated with the development of severe outcomes in COVID-19? Alberta Health Services, COVID-19 Scientific Advisory Group. Available at: <https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-sag-risk-factors-for-severe-covid-19-outcomes-rapid-review.pdf> [Accessed October 11, 2020].
50. Singer P. Is age discrimination acceptable? Project Syndicate (June 10, 2020). Available at: <https://www.project-syndicate.org/commentary/when-is-age-discrimination-acceptable-by-peter-singer-2020-06?barrier=accesspaylog> [Accessed October 11, 2020].
51. Singer P, Winkett L The duel: is it more important to save younger lives. *Prospect* (May 4, 2020). Available at: <https://www.prospectmagazine.co.uk/magazine/the-duel-is-it-more-important-to-save-younger-lives-peter-singer-debate-coronavirus-medicine-ethics-philosophy> [Accessed October 11, 2020].
52. Emanuel EJ, Persad G, Kern A, Buchanan A, Fabre C, Halliday D, et al. An ethical framework for global vaccine allocation. *Science* (2020) 369(6509):1309-1311.
53. Huang K, Bernhard R, Barak-Corren N, Bazerman M, Greene JD. Veil-of-Ignorance reasoning favors allocating resources to younger patients during the COVID-19 crisis. *PsyArXiv [Preprint]* (May 27, 2020). Available at: [file:///C:/Users/My-PC/Downloads/VOI-COVID-19-Manuscript-0520%20\(1\).pdf](file:///C:/Users/My-PC/Downloads/VOI-COVID-19-Manuscript-0520%20(1).pdf) [Accessed October 11, 2020].
54. Britton T, Ball F, Trapman P. A mathematical model reveals the influence of population heterogeneity on herd immunity to SARS-CoV-2. *Science* (2020) 369(6505):846-849.
55. Gomes MGM, Corder RM, King JG, Langwig KE, Souto-Maior C, Carneiro J, et al. Individual variation in susceptibility or exposure to SARS-CoV-2 lowers the herd immunity threshold. *medRxiv [Preprint]* (May 21, 2020). Doi: <https://doi.org/10.1101/2020.04.27.20081893>. Available at: <https://www.medrxiv.org/content/10.1101/2020.04.27.20081893v3> [Accessed October 11, 2020].
56. Aguas R, Corder RM, King JG, Goncalves G, Ferreira MU, Gomes MGM. Herd immunity thresholds for SARS-CoV-2 estimated from unfolding epidemics. *medRxiv [Preprint]* (August 31, 2020). Available at: <https://www.medrxiv.org/content/10.1101/2020.07.23.20160762v2.full.pdf> [Accessed October 11, 2020].
57. Meyerowitz EA, Richterman A, Gandhi RT, Sax PE. Transmission of SARS-CoV-2: a review of viral, host, and environmental factors. *Ann Internal Med* (2020) In Press. DOI: <https://doi.org/10.7326/M20-5008>.
58. Adam D. The limits of R. *Nature* (2020) 583:346-348.
59. Althouse BM, Wenger EA, Miller JC, Scarpino SV, Allard A, Hebert-Dufresne L, Hu H. Stochasticity and heterogeneity in the transmission dynamics of SARS-CoV-2. *arXiv.org [Preprint]* (May 27, 2020). Available at: <https://arxiv.org/abs/2005.13689> [Accessed October 10, 2020].
60. Worldometer. (Oct 02, 2020). <https://www.worldometers.info/coronavirus/country/sweden/>. [Accessed October 2, 2020].
61. 14% of coronavirus antibody tests positive in Sweden in July. *The Local* (July 23, 2020). Available at: <https://www.thelocal.se/20200723/14-of-antibody-tests-positive-in-sweden> [Accessed October 25, 2020].
62. Kontis V, Bennett JE, Rashid T, Parks RM, Pearson-Stuttard J, Guillot M, et al. Magnitude, demographics and dynamics of the effect of the first wave of the COVID-19 pandemic on all-cause mortality in 21 industrialized countries. *Nature Med* (2020) In Press. DOI: <https://doi.org/10.1038/s41591-010-1112-0>.
63. Bilinski A, Emanuel EJ. COVID-19 and excess all-cause mortality in the US and 18 comparison countries. *JAMA* (2020) In Press. DOI: 10.1001/jama.2020.20717.

Rethinking the Lockdown Groupthink

64. Baldwin R, di Mauro BW. "Introduction". In: Baldwin R, DiMauro BW, editors. Economics in the Time of COVID-19. A CEPR (Center for Economic Policy Research) Press VoxEU.org eBook (2020). p. 1-31. Available at: <https://cepr.org/sites/default/files/news/COVID-19.pdf> [Accessed October 11, 2020].
65. Foster G. Material that further addresses themes of questions at Professor Gigi Foster's PAEC testimony on Covid-19, August 12, 2000. (2020). Available at: https://parliament.vic.gov.au/images/stories/committees/paec/COVID-19_Inquiry/Tabled_Documents_Round_2/PAEC_Foster_others_matters.pdf. Based on: https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-performance-country_en [Accessed October 11, 2020].
66. Allen D, Block S, Cohen J, Eckersley P, Eifler M, Gostin L, et al., for the Edmond J. Safra Center for Ethics at Harvard University. Roadmap to pandemic resilience: massive scale testing, tracing, and supported isolation (TTSI) as the Path to Pandemic Resilience for a Free Society. (April 20, 2020). Available at: https://ethics.harvard.edu/files/center-for-ethics/files/roadmaptopandemicresilience_updated_4.20.20_1.pdf [Accessed October 11, 2020].
67. White EM, Santostefano CM, Feifer RA, Kosar CM, Blackman C, Gravenstein S, Mor V. Asymptomatic and presymptomatic severe acute respiratory syndrome Coronavirus 2 infection rates in a multistate sample of skilled nursing facilities. JAMA Internal Med (2020) In Press. DOI: 10.1001/jamainternalmed.2020.5664.
68. Ferretti L, Wymant C, Kendall M, Zhao L, Nurtay A, Abeler-Dorner L, et al. Quantifying SARS-CoV-2 transmission suggests epidemic control with digital contact tracing. Science (2020) 368(6491):eabb6939.
69. Peak CM, Kahn R, Grad Y, Childs LM, Li R, Lipsitch M, Buckee CO. Individual quarantine versus active monitoring of contacts for the mitigation of COVID-19: a modelling study. Lancet Infect Dis (2020) 20:1025-1033.
70. Moghadas SM, Fitzpatrick MC, Sah P, Pandey A, Shoukat A, Singer BH, Galvani AP. The implications of silent transmission for the control of COVID-19 outbreaks. PNAS (2020) 117(30):17513-17515.
71. Arvin AM, Fink K, Schmid MA, Cathcart A, Spreafico R, Havenar-Daughton C, et al. A perspective on potential antibody-dependent enhancement of SARS-CoV-2. Nature (2020) 584:353-364.
72. Saad-Roy CM, Wagner CE, Baker RE, Morris SE, Farrar J, Graham AL, et al. Immune life history, vaccination, and the dynamics of SARS-CoV-2 over the next 5 years. Science (2020) In Press. doi: 10.1126/science.abd7343
73. Mathew D, Giles JR, Baxter AE, Oldridge DA, Greenplate AR, Wu JE, et al. Deep immune profiling of COVID-19 patients reveals distinct immunotypes with therapeutic implications. Science (2020) 369(6508):eabc8511 DOI: 10.1126/science.abc8511
74. Grubeck-Loebenstein B, Bella SD, Iorio AM, Michel JP, Pawelec G, Solana R. Immunosenescence and vaccine failure in the elderly. Aging Clin Exp Res (2009) 21(3):201-209.
75. Lazarus JV, Ratzan SC, Palayew A, Gostin LO, Larson HJ, Rabin K, et al. A global survey of potential acceptance of a COVID-19 vaccine. Nature Med (2020) In Press. DOI: <https://doi.org/10.1038/s41591-020-1124-9>.
76. Callaway E. The unequal scramble for Coronavirus vaccines. Nature (2020) 584:506-507.
77. Lee A, Thornley S, Morris AJ, Sundborn G. Should countries aim for elimination in the covid-19 pandemic? BMJ (2020) 370:m3410
78. Time to revise the Sustainable Development Goals. Nature (2020) 583:331-332.
79. Naidoo R, Fisher B. Reset Sustainable Development Goals for a pandemic world. Nature (2020) 583:198-201.
80. The United Nations. The Sustainable Development Goals Report 2020. Available at: <https://unstats.un.org/sdgs/report/2020/The-Sustainable-Development-Goals-Report-2020.pdf> [Accessed October 11, 2020].

Rethinking the Lockdown Groupthink

81. Zetzsche DA, Consiglio R. One million or one hundred million casualties?-The impact of the COVID-19 crisis on the least developed and developing countries. Law Working Paper Series; Paper number 2020-008. (2020) Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3597657 [Accessed October 26, 2020].
82. Buheji M, da Costa Cunha K, Beka G, Mavric B, do Carmo de Souza YL, da Costa Silva SS, et al. The extent of COVID-19 pandemic socio-economic impact on global poverty. A global integrative multidisciplinary review. *Am J Economics* (2020) 10(4):213-224.
83. Hoffman J, Maclean R. Slowing the Coronavirus is speeding the spread of other diseases. *The New York Times* (June 14, 2020). Available at: <https://www.nytimes.com/2020/06/14/health/coronavirus-vaccines-measles.html>. Accessed October 11, 2020].
84. FAO, IFAD, UNICEF, WFP and WHO. The state of food security and nutrition in the world 2020. Transforming food systems for affordable health diets. Rome, FAO (2020). 320 p. Available at: <http://www.fao.org/3/ca9692en/CA9692EN.pdf> [Accessed October 25, 2020].
85. Laborde D, Martin W, Swinnen J, Vos R. COVID-19 risks to global food security. *Science* (2020) 369(6503):500-502.
86. Chanchlani N, Buchanan F, Gill PJ. Addressing the indirect effects of COVID-19 on the health of children and young people. *CMAJ* (2020) 192(32):e921-e927.
87. Silverman M, Sibbald R, Stranges S. Ethics of COVID-19-related school closures. *Can J Public Health* (2020) 111(4):462-465.
88. Robertson T, Carter ED, Chou VB, Stegmuller AR, Jackson BD, Tam Y, et al. Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study. *Lancet Glob Health* (2020) 8(7):e901-e908.
89. Sherrard-Smith E, Hogan AB, Hamlet A, Watson O, Whittaker C, Winskill P, et al., for the Imperial College COVID-19 Response Team. Report 18: The potential public health impact of COVID-19 on malaria in Africa. (May 1, 2020). Available at: <https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/covid-19/report-18-malaria/> [Accessed October 11, 2020].
90. World Health Organization. The potential impact of health service disruptions on the burden of malaria: a modelling analysis for countries in sub-Saharan Africa. Geneva: World Health Organization (2020). Available at: [file:///C:/Users/My-PC/Downloads/9789240004641-eng%20\(1\).pdf](file:///C:/Users/My-PC/Downloads/9789240004641-eng%20(1).pdf) [Accessed October 11, 2020].
91. Stop TB Partnership. The potential impact of the COVID-19 response on Tuberculosis in high-burden countries: a modelling analysis. (2020). Available at: http://www.stoptb.org/assets/documents/news/Modeling%20Report_1%20May%202020_FINAL.pdf [Accessed October 11, 2020].
92. Jewell BL, Mudimu E, Stover J, ten Brink D, Phillips AN, Smith JA, et al., for the HIV Modelling Consortium. Potential effects of disruption to HIV programmes in sub-Saharan Africa caused by COVID-19: results from multiple mathematical models. *Lancet HIV* (2020) 7:e629-e640.
93. Karim QA, Karim SSA. COVID-19 affects HIV and tuberculosis care. *Science* (2020) 369(6502):366-368.
94. GBD 2017 Child and Adolescent Health Collaborators. Disease, Injuries, and Risk Factors in child and adolescent health, 1990 to 2017: findings from the Global Burden of Diseases, Injuries, and Risk Factors 2017 study. *JAMA Pediatrics* (2019) 173(6):e190337.
95. Ioannidis JPA. Global perspective on COVID-19 epidemiology for a full-cycle pandemic. *European J Clin Investigation* (2020) In Press. DOI: <https://doi.org/10.1111/eci.13423>.
96. United Nations World Food Programme. World Food Programme to assist largest number of hungry people ever, as coronavirus devastates poor nations. (2020). <https://www.wfp.org/news/world-food-programme-assist-largest-number-hungry-people-ever-coronavirus-devastates->

Rethinking the Lockdown Groupthink

[poor#:~:text=To%20tackle%20the%20rising%20tide,record%2097%20million%20in%202019](#) [Accessed October 27, 2020].

97. Rosenbaum L. The untold toll – the pandemic’s effects on patients without Covid-19. *NEJM* (2020) 382:2368-2371.
98. Solomon MD, McNulty EJ, Rana S, Leong TK, Lee C, Sung SH, et al. The COVID-19 pandemic and the incidence of acute myocardial infarction. *NEJM* (2020) 383:691-693.
99. Sud A, Jones ME, Broggio J, Loveday C, Torr B, Garrett A, et al. Collateral damage: the impact on outcomes from cancer surgery of the COVID-19 pandemic. *Annals Oncology* (2020) 31(8):P1065-1074.
100. Kaufman HW, Chen Z, Niles J, Fesko Y. Changes in the numbers of US patients with newly identified cancer before and during the Coronavirus Disease 2019 (COVID-19) pandemic. *JAMA Netw Open* (2020) 3(8):e2017267.
101. Urbach DR, Martin D. Confronting the COVID-19 surgery crisis: time for transformational change. *CMAJ* (2020) 192(21):E585-E586.
102. Zyznian JZ. Tallying the toll of excess deaths from COVID-19. *JAMA Health Forum* (2020) 1(7):e200832.
103. UNFPA. Impact of the COVID-19 pandemic on family planning and ending gender-based violence, female genital mutilation and child marriage. Interim Technical Note (27 April 2020). Available at: https://www.unfpa.org/sites/default/files/resource-pdf/COVID-19_impact_brief_for_UNFPA_24_April_2020_1.pdf [Accessed October 11, 2020].
104. Roesch E, Amin A, Gupta J, Garcia-Moreno C. Violence against women during covid-19 pandemic restrictions. *BMJ* (2020) 369:m1712.
105. Petterson S, Westfall JM, Miller BF. Projected deaths of despair during the Coronavirus recession. Well Being Trust (May 8, 2020). WellbeingTrust.org. Available at: https://wellbeingtrust.org/wp-content/uploads/2020/05/WBT_Deaths-of-Despair_COVID-19-FINAL-FINAL.pdf [Accessed October 11, 2020].
106. Stanley M. Why the increase in domestic violence during COVID-19? *Psychology Today* (May 9, 2020). Available at: <https://www.psychologytoday.com/ca/blog/making-sense-chaos/202005/why-the-increase-in-domestic-violence-during-covid-19> [Accessed October 11, 2020].
107. Bradley NL, DiPasquale AM, Dillabough K, Schneider PS. Health care practitioners’ responsibility to address intimate partner violence related to the COVID-19 pandemic. *CMAJ* (2020) 192(22):E609-E610.
108. Moser DA, Glaus J, Frangou S, Schechter DS. Years of life lost due to the psychosocial consequences of COVID-19 mitigation strategies based on Swiss data. *Eur Psychiatry* (2020) 63(1):e58.
109. Meredith JW, High KP, Freischlag JA. Preserving elective surgeries in the COVID-19 pandemic and the future. *JAMA* (2020) In Press. doi:10.1001/jama.2020.19594.
110. Canadian Medical Association. Clearing the backlog. The cost to return wait times to pre-pandemic levels. (October 2020). Available at: <https://www.cma.ca/sites/default/files/pdf/Media-Releases/Deloitte-Clearing-the-Backlog.pdf> [Accessed October 26, 2020].
111. Wang J, Vahid S, Eberg M, Milroy S, Milkovich J, Wright FC, et al. Clearing the surgical backlog caused by COVID-19 in Ontario: a time series modelling study. *CMAJ* (2020) In Press. DOI: 10.1503/cmaj.201521.
112. Bhambhani HP, Rodrigues AJ, Yu JS, Carr JB, Gephart MH. Hospital volumes of 5 medical emergencies in the COVID-19 pandemic in 2 US medical centers. *JAMA Internal Med* (2020) In Press. DOI: 10.1001.jamainternalmed.2020.3982.
113. Docherty K, Butt J, de Boer R, Dewan P, Koeber L, Maggioni A, et al. Excess deaths during the Covid-19 pandemic: an international comparison. *medRxiv* [Preprint] (May 13, 2020). DOI: <https://doi.org/10.1101/2020.04.21.20073114>. Available at: <https://www.medrxiv.org/content/10.1101/2020.04.21.20073114v3> [Accessed October 11, 2020].

Rethinking the Lockdown Groupthink

114. Postill G, Murray R, Wilton A, Wells RA, Sirbu R, Daley MJ, Rosella LC. An analysis of mortality in Ontario using cremation data: rise in cremations during the COVID-19 pandemic. medRxiv [Preprint] (August 28, 2020). DOI: <https://doi.org/10.1101/2020.07.22.20159913>. Available at: <https://www.medrxiv.org/content/10.1101/2020.07.22.20159913v3>. [Accessed October 11, 2020].
115. Woolf SH, Chapman DA, Sabo RT, Weinberger DM, Hill L, Taylor DDH. Excess deaths from COVID-19 and other causes March-July 2020. JAMA (2020) 325(15):1562-1565.
116. Devlin H. Extra 10,000 dementia deaths in England and Wales in April. The Guardian (June 5, 2020). Available at: <https://www.theguardian.com/world/2020/jun/05/covid-19-causing-10000-dementia-deaths-beyond-infections-research-says> [Accessed October 11, 2020].
117. International Monetary Fund. Transcript of October 2020 World Economic Outlook Press Briefing. (October 13, 2020). Available at: <https://www.imf.org/en/News/Articles/2020/10/13/tr101320-transcript-of-october-2020-world-economic-outlook-press-briefing> [Accessed October 29, 2020].
118. Cooper LA, Williams DR. Excess deaths from COVID-19, community bereavement, and restorative justice for communities of color. JAMA (2020) 324(15):1491-1492.
119. Tasker JP, CBC News. Opioid deaths skyrocket, mental health suffers due to pandemic restrictions, new federal report says. (October 28, 2020) <https://www.cbc.ca/news/public-health-annual-report-opioid-deaths-skyrocket-1.5780129> [Accessed October 30, 2020].
120. Khare N, Shroff F, Nkennor B, Mukhopadhyay B. Reimagining safety in a pandemic: the imperative to dismantle structural oppression in Canada. CMAJ (2020) 192:e1218-e1220.
121. Medecins Sans Frontieres. Women and girls face greater dangers during COVID-19 pandemic. (July 2, 2020). <https://www.msf.org/women-and-girls-face-greater-dangers-during-covid-19-pandemic> [Accessed October 27, 2020].
122. Marie Stopes International. Resilience, adaptation and action. MSI's response to COVID-19. (2020). <https://www.mariestopes.org/resources/resilience-adaptation-and-action-msis-response-to-covid-19/> [Accessed October 27, 2020].
123. Centers for Disease Control and Prevention. Weekly updates by select demographics and geographical characteristics: provisional death counts for Coronavirus Disease 2019 (COVID-19). (2020) Available at: https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm [Accessed October 10, 2020].
124. Statistics Canada. Deaths and mortality rates, by age group. (2020) Available at: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310071001> [Accessed October 10, 2020].
125. Government of Canada. Coronavirus disease 2019 (COVID-19): epidemiology update. (2020) Available at: <https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html> [Accessed October 10, 2020].
126. Spiegelhalter D. Use of "normal" risk to improve understanding of dangers of covid-19. BMJ (2020) 370:m3259.
127. United Nations, Department of Economic and Social Affairs, Population Division. World Mortality 2019: Data Booklet (ST/ESA/SER.A/436). (2020). Available at: <https://www.un.org/en/development/desa/population/publications/pdf/mortality/WMR2019/WorldMortality2019DataBooklet.pdf> [Accessed October 10, 2020].
128. World Health Organization. Coronavirus disease (COVID-19) weekly epidemiological update and weekly operational update: situation reports. (2020). Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports> [Accessed October 11, 2020].
129. You D, Hug L, Ejdemyr S, Idele P, Hogan D, Mathers C, et al. Global, regional, and national levels and trends in under-5 mortality between 1990 and 2015, with scenario-based projections to 2030: a systematic analysis by the UN Inter-agency Group for Child Mortality Estimation. Lancet (2015) 386(10010):2275-2286.

Rethinking the Lockdown Groupthink

130. Burstein R, Henry NJ, Collison ML, Marczak LB, Sligar A, Watson S, et al. Mapping 123 million neonatal, infant and child deaths between 2000 and 2017. *Nature* (2019) 574:353-358.
131. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Road traffic injuries and deaths – a global problem. (Dec 18, 2019). <https://www.cdc.gov/injury/features/global-road-safety/index.html#:~:text=Each%20year%2C%201.35%20million%20people,on%20roadways%20around%20the%20world.&text=Every%20day%2C%20almost%203%2C700%20people,pedestrians%2C%20motorcyclists%2C%20and%20cyclists> [Accessed October 11, 2020].
132. World Health Organization. Tobacco. (27 May 2020). <https://www.who.int/news-room/fact-sheets/detail/tobacco> [Accessed October 11, 2020].
133. Global tuberculosis report 2019. Geneva: World Health Organization (2019). Available at: <https://apps.who.int/iris/bitstream/handle/10665/329368/9789241565714-eng.pdf?ua=1> [Accessed October 11, 2020].
134. Centers for Disease Control and Prevention. Malaria's Impact Worldwide. (Feb 25, 2020). https://www.cdc.gov/malaria/malaria_worldwide/impact.html [Accessed October 11, 2020].
135. World Health Organization. More than 140,000 die from measles as cases surge worldwide. Press Release (5 Dec 2019). <https://www.who.int/news-room/detail/05-12-2019-more-than-140-000-die-from-measles-as-cases-surge-worldwide> [Accessed October 11, 2020].
136. UNAIDS. Global HIV & AIDS statistics – 2020 fact sheet. <https://www.unaids.org/en/resources/fact-sheet> [Accessed October 11, 2020].
137. GBD 2017 Diarrhoeal Disease Collaborators. Quantifying the risks and interventions that have affected the burden of diarrhoea among children younger than 5 years: an analysis of the Global Burden of Disease Study 2017. *Lancet Infect Dis* (2020) 20(1):37-59.
138. GBD 2017 Lower Respiratory Infections Collaborators. Quantifying the risks and interventions that have affected the burden of respiratory infections among children younger than 5 years: an analysis for the Global Burden of Disease Study 2017. *Lancet Infect Dis* (2020) 20(1):60-79.
139. GBD 2017 Diet Collaborators. Health effects of dietary risks in 195 countries, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet* (2019) 393(10184):1958-1972.
140. Paget J, Spreeuwenberg P, Charu V, Taylor RJ, Iuliano AD, Bresee J, et al. Global mortality associated with seasonal influenza epidemics: new burden estimates and predictors from the GLaMOR Project. *J Glob Health* (2019) 9(2):020421.
141. Wong JY, Kelly H, Ip DKM, Wu JT, Leung GM, Cowling BJ. Case fatality risk of influenza A (H1N1pdm09): a systematic review. *Epidemiology* (2013) 24(6):830-841.
142. Wang X, Li Y, O'Brien KL, Madhi SA, Widdowson MA, Byass P, et al. Global burden of respiratory infections associated with seasonal influenza in children under 5 years in 2018: a systematic review and modelling study. *Lancet Glob Health* (2020) 8(4):e497-e510.
143. Viboud C, Simonsen L, Fuentes R, Flores J, Miller MA, Chowell G. Global mortality impact of the 1957-1959 Influenza pandemic. *J Infect Dis* (2016) 213:738-745.
144. Frijters P. The Corona Dilemma. Club Troppo. (March 21, 2020). Available at: <https://clubtrotto.com.au/2020/03/21/the-corona-dilemma/> [Accessed October 11, 2020].
145. Frijters P, Clark AE, Krekel C, Layard R. A happy choice: wellbeing as the goal of government. *Behavioural Public Policy* (2020) 4(2):126-165.
146. Frijters P, Krekel C. "Chapter 1: the case for wellbeing as the goal of government in the context of constraints on policy-making." In: Frijters P, Krekel C, editors. *A handbook for Wellbeing Policy-Making: history, theory, measurement, implementation, and examples*. London: Oxford University Press (2020). In Press.
147. Miles D, Stedman M, Heald A. Living with Covid-19: balancing costs against benefits in the face of the virus. *National Institute Economic Review* (2020) 253:R60-R76. Available at:

Rethinking the Lockdown Groupthink

<https://www.cambridge.org/core/journals/national-institute-economic-review/article/living-with-covid19-balancing-costs-against-benefits-in-the-face-of-the-virus/C1D46F6A3118D0360CDAB7A08E94ED22> [Accessed October 20, 2020].

148. Born B, Dietrich A, Muller GJ. The lockdown effect – a counterfactual for Sweden. Center for Economic Policy Research Discussion Papers 14744 (July 2020).

149. Luskin DL. The failed experiment of Covid lockdowns: new data suggest that social distancing and reopening haven't determined the spread. Wall Street Journal (Opinion) (September 2, 2020).

150. Atkeson A, Kopecky K, Zha T. Four stylized facts about COVID-19. National Bureau of Economic Research (NBER) Working Paper No. 27719. (August 2020). Available at:

<https://www.nber.org/papers/w27719.pdf> [Accessed October 15, 2020].

151. Chaudhry R, Dranitsaris G, Mubashir T, Bartoszko J, Riazi S. A country level analysis measuring the impact of government actions, country preparedness and socioeconomic factors on COVID-19 mortality and related health outcomes. EClinicalMedicine (2020) 25:100464.

152. Wood SN. Did COVID-19 infections decline before UK lockdown? arXiv [Preprint] (Sept 17, 2020).

Available at: <https://arxiv.org/abs/2005.02090> [Accessed October 11, 2020].

153. Chin V, Ioannidis JPA, Tanner MA, Cripps S. Effects of non-pharmaceutical interventions on COVID-19: a tale of three models. medRxiv [Preprint] (September 13, 2020). Available at:

<https://www.medrxiv.org/content/10.1101/2020.07.22.20160341v2> [Accessed October 27, 2020].

154. Homburg S, Kuhbandner C. Comment on Flaxman et al. (2020, Nature): The illusory effects of non-pharmaceutical interventions on COVID-19 in Europe. Advance [Preprint] (June 17, 2020). Available at: <file:///C:/Users/My-PC/Downloads/2020-Comment-Flaxman%20Preprint.pdf> [Accessed October 27, 2020].

155. Islam N, Sharp SJ, Chowell G, Shabnam S, Kawachi I, Lacey B, et al. Physical distancing interventions and incidence of coronavirus disease 2019: natural experiment in 149 countries. BMJ (2020) 370:m2743.

156. Frijters P. On Corona/Covid-19, herd immunity, and WELLBY tradeoffs – key predictions and numbers. Club Troppo (May 14, 2020). Available at: <https://clubtroppo.com.au/2020/05/14/on-corona-covid-19-herd-immunity-and-wellby-tradeoffs-key-predictions-and-numbers/> [Accessed October 25, 2020].

157. Frijters P. Has the Coronavirus panic cost us at least 10 million lives already? Club Troppo (March 18, 2020). Available at: <https://clubtroppo.com.au/2020/03/18/has-the-coronavirus-panic-cost-us-at-least-10-million-lives-already/> [Accessed October 11, 2020].

158. Frijters P. COVID strategies for Australia: herd immunity or quarantine land? Club Troppo (May 28, 2020). Available at: <https://clubtroppo.com.au/2020/05/28/covid-strategies-for-australia-herd-immunity-options-or-quarantine-land/> [Accessed October 11, 2020].

159. Johnson P. Heated Q+A discussion sees economist Gigi Foster deny she is 'advocating for people to die'. ABC News (27 July 2020). Available at: <https://www.abc.net.au/news/2020-07-28/gigi-foster-accused-advocating-for-covid-19-deaths-q+a/12497442> [Accessed October 11, 2020].

160. Berwick DM. The moral determinants of health. JAMA (2020) 324(3):225-226.

161. Singer P. The Life You Can Save. Random House Trade Paperbacks. (2010).

162. Corcoran T. The price of life: lockdown costs are real. But are the benefits? Financial Post (May 15, 2020). Available at: <https://financialpost.com/opinion/terence-corcoran-the-price-of-life-lockdown-costs-are-real-but-are-the-benefits> [Accessed October 11, 2020].

163. Sullivan R, Chalkidou K. Urgent call for an Exit Plan: the economic and social consequences of responses to COVID-19 pandemic. Center for Global Development (March 31, 2020). Available at: <https://www.cgdev.org/blog/urgent-call-exit-plan-economic-and-social-consequences-responses-covid-19-pandemic> [Accessed October 11, 2020].

Rethinking the Lockdown Groupthink

164. Fernandes N. Economic effects of coronavirus outbreak (COVID-19) on the world economy. (April 2020). IESE Business School Spain. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3557504 [Accessed October 11, 2020].
165. Bartik AW, Bertrand M, Cullen Z, Glaeser EL, Luca M, Stanton C. The impact of COVID-19 on small business outcomes and expectations. PNAS (2020) 117(30):17656-17666.
166. Snyder-Mackler N, Burger JR, Gaydos L, Belsky DW, Noppert GA, Campos FA, et al. Social determinants of health and survival in humans and other animals. Science (2020) 368:eaax9553.
167. Puterman E, Weiss J, Hives BA, Gemmill A, Karasek D, Mendes WB, Rehkopf DH. Predicting mortality from 57 economic, behavioral, social, and psychological factors. PNAS (2020) 117(28):16273-16282.
168. Bzdok D, Dunbar RIM. The neurobiology of social distance. Trends in Cognitive Sciences (2020) 24(9):717-733.
169. Johnson SB, Riley AW, Granger DA, Riis J. The science of early life toxic stress for pediatric practice and advocacy. Pediatrics (2013) 131:319-327.
170. Garner AS, Shonkoff JP, Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, Section on Developmental and Behavioral Pediatrics. Early childhood adversity, toxic stress, and the role of the pediatrician translating developmental science into lifelong health. Pediatrics (2012) 129:e224-e231.
171. Campbell F, Conti G, Heckman JJ, Moon SH, Pinto R, Pungello E, Pan Y. Early childhood investments substantially boost adult health. Science (2014) 343:1478-1485.
172. Walhovd KB, Krogsrud SK, Amlien IK, Bartsch H, Bjørnerud A, Due-Tønnessen P, et al. Neurodevelopment origins of lifespan changes in brain and cognition. PNAS (2016) 113:9357-9362.
173. Joint Statement by ILO, FAO, IFAD, and WHO.. Impact of Covid-19 on people's livelihoods, their health and our food systems. (October 13, 2020). <https://www.who.int/news/item/13-10-2020-impact-of-covid-19-on-people's-livelihoods-their-health-and-our-food-systems> [Accessed October 31, 2020].
174. Holt-Lunstad J, Smith TB, Baker M, Harris T, Stephenson D. Loneliness and social isolation as risk factors for mortality: a meta-analytic review. Perspectives Psychological Science (2015) 10(2):227-237.
175. Roelfs DJ, Shor E, Davidson KW, Schwartz JE. Losing life and livelihood: a systematic review and meta-analysis of unemployment and all-cause mortality. Social Science Med (2011) 72:840-854
176. Slavich GM. Life stress and health: a review of conceptual issues and recent findings Teach Psychol (2016) 43(4):346-355
177. Raising Canada 2020. Top 10 threats to childhood in Canada and the impact of COVID-19. Children First Canada, O'Brien Institute for Public Health, Alberta Children's Hospital Research Institute. (2020). Available at: https://static1.squarespace.com/static/5669d2da9cad69fb2f8d32e/t/5f51503d5ceab254db134729/1599164484483/Raising+Canada+Report_Final_Sept.pdf [Accessed October 11, 2020].
178. Carroll A, Hicks A, Saxinger L. COVID-19 Scientific Advisory Group Rapid Evidence Report. Topic: What role might children play in community SARS-CoV-2 transmission? What measures might mitigate potential additional risk of transmission of COVID-19 related to school and daycare reopening? Alberta Health Services, COVID-19 Scientific Advisory Group (August 7, 2020). Available at: <https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-sag-role-of-children-in-community-transmission-rapid-review.pdf> [Accessed October 16, 2020].
179. The education revolution must be equalized. Nature (2020) 585:482.
180. Frijters P, Krekel C. "Chapter 5: Applying wellbeing insights to existing policy evaluations and appraisals". In: Frijters P, Krekel C, editors. A handbook for Wellbeing Policy-Making: history, theory, measurement, implementation, and examples. London: Oxford University Press (2020).

Rethinking the Lockdown Groupthink

181. Foster G. Cost-benefit analysis executive summary. Presented to Victorian Parliament in Australia. (August 2020). Available at: https://parliament.vic.gov.au/images/stories/committees/paec/COVID-19_Inquiry/Tabled_Documents_Round_2/CBA_Covid_Gigi_Foster.pdf [Accessed October 11, 2020].
182. Foster G. Early estimates of the impact of COVID-19 disruptions on jobs, wages, and lifetime earnings of schoolchildren in Australia. *Australian J Labour Economics* (2020) 23(2):129-151.
183. Heatley D. A cost benefit analysis of 5 extra days at COVID-19 alert level 4. New Zealand Productivity Commission. (2020). Available at: <https://www.productivity.govt.nz/assets/Documents/cost-benefit-analysis-covid-alert-4/92193c37f4/A-cost-benefit-analysis-of-5-extra-days-at-COVID-19-at-alert-level-4.pdf> [Accessed October 10, 2020].
184. Cutler DM, Summer LH. The COVID-19 pandemic and the \$16 Trillion virus. *JAMA* (2020) 324(15):1495-1496. Details given in Appendix to “The COVID-19 Pandemic and the \$16 Trillion Virus” (2020) Available at: https://scholar.harvard.edu/files/cutler/files/cs_appendix.pdf [Accessed October 29, 2020].
185. Congressional Budget Office. An update to the economic outlook: 2020 to 2030. (July 2020). <https://www.cbo.gov/publication/56517> [Accessed October 30, 2020].
186. Sandman PM, Lanard J. COVID-19: The CIDRAP (Center for Infectious Disease Research and Policy, University of Minnesota) Viewpoint. Part 2: Effective COVID-19 crisis communication. (May 6, 2020). Available at: <https://www.cidrap.umn.edu/sites/default/files/public/downloads/cidrap-covid19-viewpoint-part2.pdf> [Accessed October 10, 2020].
187. Deb P, Furceri D, Ostry JD, Tawk N. The economic effects of Covid-19 containment measures. *COVID Economics, CEPR* (2020) 24:32-75. Available at: <https://cepr.org/sites/default/files/news/CovidEconomics24.pdf#Paper2> [Accessed October 10, 2020].
188. Bonadio B, Huo Z, Levchenko AA, Pandalai-Nayar N. Global Supply Chains in the Pandemic. (May 2020) NBER Working Paper 27224; National Bureau of Economic Research Inc. Available at: <https://www.nber.org/papers/w27224.pdf> [Accessed October 10, 2020].
189. Coibion O, Gorodnichenko Y, Weber M. The cost of the COVID-19 crisis: Lockdowns, macroeconomic expectations, and consumer spending. IZA Institute of Labor Economics Discussion Paper, *COVID Economics* (2020) IZA DP No. 13224. Available at: <http://ftp.iza.org/dp13224.pdf> [Accessed October 10, 2020].
190. Bank of England May Monetary Policy Report. (2020) <https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2020/may/monetary-policy-report-may-2020>. See Pages 6-7 and Table 1A. [Accessed October 10, 2020].
191. Reserve Bank of Australia Projections. Statement on Monetary Policy – May 2020 6. Economic Outlook. (2020) <https://www.rba.gov.au/publications/smp/2020/may/economic-outlook.html> [Accessed October 9, 2020].
192. OECD. Evaluating the initial impact of COVID-19 containment measures on economic activity. OECD.org (June 10, 2020). <https://www.oecd.org/coronavirus/policy-responses/evaluating-the-initial-impact-of-covid-19-containment-measures-on-economic-activity-b1f6b68b/> [Accessed October 10, 2020].
193. Herridge MS. Fifty Years of Research in ARDS: Long-term follow-up after Acute Respiratory Distress Syndrome. Insights for managing medical complexity after critical illness. *Am J Respir Crit Care Med* (2017) 196(11):1380-1384.
194. Kox M, Waalders NJB, Kooistra EJ, Gerretsen J, Pickkers P. Cytokine levels in critically ill patients with COVID-19 and other conditions. *JAMA* (2020) 324(15):1565-1567.
195. Girard TD, Self WH, Edwards KM, Grijalva CG, Zhu Y, Williams DJ, et al. Long-term cognitive impairment after hospitalization for community-acquired pneumonia: a prospective study. *J Gen Intern Med* (2018) 33(6):929-935.

Rethinking the Lockdown Groupthink

196. Halpin SJ, McIvor C, Whyatt G, Adams A, Harvey O, McLean L, et al. Postdischarge symptoms and rehabilitation needs in survivors of COVID-19 infection: a cross-sectional evaluation. *J Med Virology* (2020) In Press. DOI: 10.1002.jmv.26368
197. Garrigues E, Janvier P, Kherabi Y, Le Bot A, Hamon A, Gouze H, et al. Post-discharge persistent symptoms and health-related quality of life after hospitalization for COVID-19. *J Infection* (2020) In Press. DOI: <https://doi.org/10.1016/j.jinf.2020.08.029>
198. Carfi A, Bernabei R, Landi F. Persistent symptoms in patients after acute COVID-19. *JAMA* (2020) 324:603-605.
199. Tenforde MW, Kim SS, Lindsell CJ, Rose EB, Shapiro NI, Files DC, et al. Symptom duration and risk factors for delayed return to usual health among outpatients with COVID-19 in a multistate health care systems network – United States, March – June 2020. *MMWR* (2020) 69(30):993-998.
200. Arnold DT, Hamilton FW, Milne A, Morley A, Viner J, Atwood M, et al. Patient outcomes after hospitalisation with COVID-19 and implications for follow-up: results from a prospective UK cohort. *medRxiv* [Preprint] (August 14, 2020). Available at: <https://www.medrxiv.org/content/10.1101/2020.08.12.20173526v1> [Accessed October 10, 2020].
201. Vaes AW, Machado FVC, Meys R, Delbressine JM, Goertz YMJ, Herck MV, et al. Care dependency in non-hospitalized patients with COVID-19. *J Clin Med* (2020) 9(9):2946. DOI: <https://doi.org/10.3390/jcm9092946>.
202. Cirulli ET, Barrett KMS, Riffle S, Bolze A, Neveux I, Dabe S, et al. Long-term COVID-19 symptoms in a large unselected population. *medRxiv* [Preprint] (October 24, 2020) Available at: <https://www.medrxiv.org/content/10.1101/2020.10.07.20208702v2.full> [Accessed Nov 2, 2020];
203. Sudre CH, Murray B, Varsavsky T, Graham MS, Penforld RS, Bowyer RC, et al. Attributes and predictors of Long-COVID: analysis of COVID cases and their symptoms collected by the Covid Symptoms App. *medRxiv* [Preprint] (October 21, 2020) Available at: <https://www.medrxiv.org/content/10.1101/2020.10.19.20214494v1> [Accessed November 2, 2020].
204. Czeisler ME, Lane RI, Petrosky E, Wiley JF, Christensen A, Njai R, et al. Mental health, substance use, and suicidal ideation during the COVID-19 pandemic – United States, June 24-30, 2020. *MMWR* (2020) 69(32):1049-1057.
205. Centers for Disease Control and Prevention. Mental Health: Household Pulse Survey (2020) <https://www.cdc.gov/nchs/covid19/pulse/mental-health.htm> [Accessed October 26, 2020].
206. Ettman CK, Abdalla SM, Cohen GH, Sampson L, Vivler PM, Galea S. Prevalence of depression symptoms in US adults before and during the COVID-19 pandemic. *JAMA Netw Open* (2020) 3(9):e2019686
207. Brindal E. A wellbeing survey of CSIRO Total Wellbeing Diet database during the COVID-19 pandemic. Commonwealth Scientific and Industrial Research Organization (CSIRO) Australia's National Science Agency (2020). Available at: [file:///C:/Users/My-PC/Downloads/COVID-Survey-Summary-of-Results-June-2020%20\(7\).pdf](file:///C:/Users/My-PC/Downloads/COVID-Survey-Summary-of-Results-June-2020%20(7).pdf) [Accessed October 11, 2020].
208. Statistics Canada. Canadian's mental health during the COVID-19 pandemic. (2020) <https://www150.statcan.gc.ca/n1/daily-quotidien/200527/dq200527b-eng.htm> [Accessed October 31, 2020].
209. Walker PGT, Whittaker C, Watson OJ, Baguelin M, Winskill P, Hamlet A, et al. The impact of COVID-19 and strategies for mitigation and suppression in low- and middle-income countries. *Science* (2020) 369:413-422.
210. Sethi R, Siddarth D, Holland A, Archibong B, Annan F, Somanathan R, Cardenas JC. COVID-19 Rapid Response Impact Initiative. White Paper 11: Towards Global Pandemic Resilience. Edmond J Safra Center for Ethics (April 23, 2020). Available at: <https://ethics.harvard.edu/files/center-for-ethics/files/safracenterforethicswhitepaper11d.pdf> [Accessed October 10, 2020].

Rethinking the Lockdown Groupthink

211. Yeung J, Sur P. The pandemic has created a second crisis in India – the rise of child trafficking. CNN World. (October 26, 2020) Available at: <https://www.ctvnews.ca/world/the-pandemic-has-created-a-second-crisis-in-india-the-rise-of-child-trafficking-1.5160828> [Accessed October 31, 2020].
212. Nordling L. Africa's pandemic puzzle: why so few cases and deaths? Science (2020) 369(6505):756-757.
213. Bell R, Butler-Jones D, Clinton J, Closson T, Davidson J, Fulford M, et al. Dealing with COVID-19: an open letter to Canada's prime minister and provincial and territorial premiers. (July 9, 2020). Available at: <https://healthydebate.ca/opinions/an-open-letter-to-pm-covid19> [Accessed October 11, 2020].
214. Newman C, McFarlane I, Frijters P, Foster G, Swan P, Zimmerman A, et al. Open up our country – sign the open letter: To The National Cabinet. <https://aip.asn.au/2020/06/open-up-our-country-sign-the-open-letter/> [Accessed October 16, 2020].
215. Melnick E, Ioannidis J. Should governments continue lockdown to slow the spread of covid-19? BMJ (2020) 369:m1924.
216. Ioannidis J. Another shutdown would do more harm than good. National Post (August 15, 2020). Available at: <https://nationalpost.com/opinion/john-ioannidis-another-shutdown-would-do-more-harm-than-good> [Accessed October 11, 2020].
217. Jha S. Commentary: John Ioannidis explains his COVID views. Medscape Infectious Diseases. (July 15, 2020). Available at: <https://www.medscape.com/viewarticle/933977> [Accessed October 11, 2020].
218. Ioannidis JPA. The totality of the evidence. Boston Review. (May 26, 2020). Available at: <http://bostonreview.net/science-nature/john-p-ioannidis-totality-evidence> [Accessed October 11, 2020].
219. Ioannidis JPA, Cripps S, Tanner MA. Forecasting for COVID-19 has failed. International J Forecasting (2020) In press. DOI: <https://doi.org/10.1016/j.iforecast.2020.08.004>
220. Sabhlok S. Why I quit rather than be silenced: Vic Treasury insider. Financial Review (Sept 16, 2020). Available at: <https://www.afr.com/policy/economy/victoria-has-locked-itself-into-a-lockdown-blunder-20200916-p55w1z> [Accessed October 16, 2020].
221. Kullforff M, Gupta S, Bhattacharya J, et al. Great Barrington Declaration. (October 4, 2020). <https://gbdeclaration.org/> [Accessed October 25, 2020].
222. Ioannidis JPA. Scientific petitions and open letters in the covid-19 era. BMJ (2020) 371:m4048.
223. Alwan NA, Burgess RA, Ashworth S, Beale R, Bhadelia N, Bogaert D, et al. Scientific consensus on the COVID-19 pandemic: we need to act now. Lancet (2020) In Press. DOI: [https://doi.org/10.1016/S0140-6736\(20\)32153-X](https://doi.org/10.1016/S0140-6736(20)32153-X)
224. Alberta Chief Medical Officer of Health. Herd immunity and the Great Barrington Declaration. (2020) Available at: <https://www.alberta.ca/herd-immunity-and-the-great-barrington-declaration.aspx> [Accessed October 29, 2020].
225. News Feature. The false promise of herd immunity for COVID-19. Nature (2020) In Press. Available at: <https://www.nature.com/articles/d41586-020-02948-4> [Accessed October 26, 2020].
226. Omer SB, Yildirim I, Forman HP. Herd immunity and implications for SARS-CoV-2 control. JAMA (2020) In Press. DOI: 10.1001/jama.2020.20892.
227. EuroMOMO. EuroMOMO Bulletin, week 44, 2020. (2020) <https://www.euromomo.eu/> [Accessed October 29, 2020].
228. Rice K, Bynne B, Martin V, Ackland GJ. Effect of school closures on mortality from coronavirus disease 2019: old and new predictions. BMJ (2020) 371:m3588.
229. Teslya A, Pham TM, Godijk NG, Kretzschmar ME, Bootsma MCJ, Rozhnova G. Impact of self-imposed prevention measures and short-term government-imposed social distancing on mitigation and delaying a COVID-19 epidemic: a modelling study. PLoS Medicine (2020) 17(7):e1003166. DOI: 10.1371/journal.pmed.1003166.

Rethinking the Lockdown Groupthink

230. Jones NR, Qureshi ZU, Temple RJ, Larwood JP, Greenhaigh T, Bourouiba L. Two metres or one: what is the evidence for physical distancing in covid-19. *BMJ* (2020) 370:m3223.
231. Chin V, Samia NI, Marchant R, Rosen O, Ioannidis JPA, Tanner MA, Cripps S. A case study in model failure? Covid-19 daily deaths and ICU bed utilisation predictions in New York State. *Eur J Epidemiol* (2020) 35:733-742.
232. Prado-Vivar B, Becerra-Wong M, Guadalupe JJ, Marquez S, Butierrez B, Rojas-Silva P, et al. COVID-19 re-infection by a phylogenetically distinct SARS-CoV-2 variant, first confirmed event in South America. SSRN [Preprint]. (Sept 9, 2020) Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3686174 [Accessed October 29, 2020].
233. Van Elslande J, Vermeersch P, Vandervoort K, Wawina-Bokalinga T, Vanmechelen B, Wollants E, et al. Symptomatic SARS-CoV-2 reinfection by a phylogenetically distinct strain. *Clinical Infectious Dis* (2020) In Press. DOI: <https://doi.org/10.1093/cid/ciaa1330>. Milder symptoms.
234. To KKW, Hung IFN, Ip JD, Chu AWH, Chan WM, Tam AR, et al. Coronavirus disease 2019 (COVID-19) re-infection by a phylogenetically distinct severe acute respiratory syndrome Coronavirus 2 strain confirmed by whole genome sequencing. *Clinical Infect Dis* (2020) In Press. DOI: 10.1093/cid/ciaa1275.
235. Gupta V, Bhojar RC, Jain A, Srivastava S, Upadhyay R, Imran M, et al. Asymptomatic reinfection in 2 healthcare workers from India with genetically distinct severe acute respiratory syndrome Coronavirus 2. *Clinical Infect Dis* (2020) In Press. DOI: 10.1093/cid/ciaa1451.
236. Tillett RL, Sevinsky JR, Hartley PD, Kerwin H, Crawford N, Gorzalski A, et al. Genomic evidence for reinfection with SARS-CoV-2: a case study. *Lancet Infect Dis* (2020) In Press. DOI: [https://doi.org/10.1016/S1473-3099\(20\)30764-0](https://doi.org/10.1016/S1473-3099(20)30764-0). More severe- hospitalized
237. Mulder M, van der Vegt DWJM, Munnink BBO, GeurtsvanKessel CH, van de Bovenkamp J, Sikkema RS, et al. Reinfection of SARS-CoV-2 in an immunocompromised patient: a case report. *Clinical Infect Dis* (2020) In Press. DOI: <https://doi.org/10.1093/cid/ciaa1538>
238. Harris B, Pulice C, Cookson C, Burn-Murdoch J, Kazmin A, Cotterill J. Hotspots of resurgent Covid erode faith in 'herd immunity'. *Financial Times* (2020). Available at: <https://www.ft.com/content/5b96ee2d-9ced-46ae-868f-43c9d8df1ecb> [Accessed October 26, 2020].
239. Boadle A. In Brazil's Amazon a COVID-19 resurgence dashes herd immunity hopes. *National Post* (2020) Available at: <https://nationalpost.com/pmnl/health-pmn/in-brazils-amazon-a-covid-19-resurgence-dashes-herd-immunity-hopes> [Accessed October 26, 2020].
240. Buss LF, Prete Jr CA, Abraham CMM, Mendrone Jr A, Salomon T, de Almeida-Neto C, et al. COVID-19 herd immunity in the Brazilian Amazon. *medRxiv* [Preprint] (September 21, 2020). Available at: <https://www.medrxiv.org/content/10.1101/2020.09.16.20194787v1> [Accessed October 26, 2020].
241. Hallal PC, Hartwig FP, Horta BL, Victora GD, Silveira MF, Struchiner C, et al. Remarkable variability in SARS-CoV-2 antibodies across Brazilian regions: nationwide serological household survey in 27 states. *medRxiv* [Preprint] (May 30, 2020). Available at: <https://www.medrxiv.org/content/10.1101/2020.05.30.20117531v1> [Accessed October 26, 2020].
242. dos Santos VA, Rafael MM, Sabino EC, da Silva Duarte AJ. Sensitivity of the Wondfo One Step COVID-19 test using serum samples. *Clinics* (2020) 75:e2013.
243. Mishra S, Kwong JC, Chan AK, Baral SD. Understanding heterogeneity to inform the public health response to COVID-19 in Canada. *CMAJ* (2020) 192(25):e684-e685.
244. Holroyd-Leduc JM, Laupacis A. Continuing care and COVID-19: a Canadian tragedy that must not be allowed to happen again. *CMAJ* (2020) 192(23):e632-e633.
245. Williams DR, Cooper LA. COVID-19 and health equity – a new kind of “herd immunity.” *JAMA* (2020) 323(24):2478-2480.
246. Esposito S, Principi N. School closure during the Coronavirus Disease 2019 (COVID-19) pandemic: an effective intervention at the Global level? *JAMA Pediatr.* (2020) In Press. DOI: <https://doi.org/10.1001/jamapediatrics.2020.1892>.

Rethinking the Lockdown Groupthink

247. Levinson M, Cevik M, Lipsitch M. Reopening primary schools during the pandemic. *NEJM* (2020) 383(10):981-985.
248. Forbes MB, Mehta K, Kumar K, Lu J, Le Saux N, Sampson M, Robinson J. COVID-19 infection in children: estimating pediatric morbidity and mortality. *medRxiv* [Preprint] (May 8, 2020). DOI: <https://doi.org/10.1101/2020.05.05.20091751>. Available at: <https://www.medrxiv.org/content/10.1101/2020.05.05.20091751v1> [Accessed October 11, 2020].
249. Davies NG, Klepac P, Liu Y, Prem K, Jit M, CMMID COVID-19 working group and Eggo RM. Age-dependent effects in the transmission and control of COVID-19 epidemics. *Nature Med* (2020) 26:1205-1211.
250. Viner RM, Mytton OT, Bonell C, Melendez-Torres J, Ward J, Hudson L, et al. Susceptibility to SARS-CoV-2 infection among children and adolescents compared with adults. A systematic review and meta-analysis. *JAMA Pediatr* (2020) In Press. DOI: 10.1001/jamapediatrics.2020.4573.
251. Snape MD, Viner RM. COVID-19 in children and young people. *Science* (2020) 370(6514):286-288.
252. The National Collaborating Centre for Methods and Tools. Rapid Review Update 6: What is the specific role of daycares and schools in COVID-19 transmission. (Sept 14, 2020). Available at: <https://www.nccmt.ca/uploads/media/media/0001/02/98cc589e2c1db4996ba0cb5d52daef448b175f24.pdf> [Accessed October 11, 2020].
253. Lewis Y. Why schools probably aren't COVID hotspots. *Nature* (2020). In Press. Available at: <https://www.nature.com/articles/d41586-020-02973-3> [Accessed October 31, 2020].
254. Viner RM, Russell SJ, Croker H, Packer J, Ward J, Standfield C, et al. School closure and management practices during coronavirus outbreaks including COVID-19: a rapid systematic review. *Lancet Child Adolesc Health* (2020) 4(5):397-404.
255. Hepburn C, O'Callaghan B, Stern N, Stiglitz J, Zenghelis D. Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change? *Oxford Review of Economic Policy* (May 8, 2020) Smith School Working Paper No. 20-02. ISSN 2732-4214 (Online). Available at: <https://www.smithschool.ox.ac.uk/publications/wpapers/workingpaper20-02.pdf> [Accessed October 11, 2020].
256. Andrijevic M, Schleussner CF, Gidden MJ, McCollum DL, Rogelj J. COVID-19 recovery funds dwarf clean energy investment needs. A modest fraction of current global stimulus funds can put the world on track to achieve Paris Agreement goals. *Science* (2020) 370(6514):298-300.
257. Gandhi M, Rutherford GW. Facial masking for Covid-19 – potential for “variola” as we await a vaccine. *NEJM* (2020) In Press. DOI: 10.1056/NEJMp2026913
258. Chou R, Dana T, Jungbauer R, Weeks PHC. Update Alert 3: Masks for prevention of respiratory virus infections, including SARS-CoV-2, in health care and community settings. *Annals Internal Med* (2020) In Press. DOI: 10.7326/L20-1292.
259. Krammer F. SARS-CoV-2 vaccines in development. *Nature* (2020) 586:516-527.
260. Lamontagne F, Agoritsas T, Macdonald H, Leo YS, Diaz J, Agarwal A, et al. A living WHO guideline on drugs for covid-19. *BMJ* (2020) 370:m3379.
261. Shaman J, Galanti M. Will SARS-CoV-2 become endemic? *Science* (2020) 370(6516):527-529.
262. Thomson S, Ip EC. COVID-19 emergency measures and the impending authoritarian pandemic. *J Law Biosci* (2020) In Press. DOI: 10.1093/jlb/Isaa064
263. Frijters P. The descent into Darkness in the UK and Victoria. Quo Vadis? Club Troppo (September 10, 2020). Available at: <https://clubtroppo.com.au/2020/09/10/the-descent-into-darkness-of-the-uk-and-victoria-quo-vadis/> [Accessed October 27, 2020].
264. Timotijevic J. Society's 'new normal'? The role of discourse in surveillance and silencing of dissent during and post Covid-19. *SSRN* [Preprint] (2020) Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3608576 [Accessed October 31, 2020].

Rethinking the Lockdown Groupthink

Table 1. Initial modeling predictions that induced fear and crowd-effects

Reference	Statements and Predictions from the modeling
Kissler et al. ²⁻⁴	“prolonged or intermittent social distancing may be necessary into 2022 [to avoid overwhelming critical care capacity]... expanded critical care capacity... would improve the success of intermittent distancing and hasten the acquisition of herd immunity”
	“projected that recurrent wintertime outbreaks of SARS-CoV-2 will probably occur after the initial, most severe pandemic wave [if immunity wanes over 40 weeks]”
	With a baseline reproductive number (Ro) 2.5, no seasonality to viral transmission, and the current intensive care capacity of the USA they projected the need for intermittent lockdowns occurring for a total of 75% of the time, even after July 2022.
Imperial College modeling of non-pharmaceutical interventions in USA and UK ⁵	“suppression [effective reproductive number (Re)<1] will minimally require a combination of social distancing of the entire population, home isolation of cases and household quarantine of their family members. This may need to be supplemented by school and university closures... [and] Will need to be maintained until a vaccine becomes available.”
	“we show that intermittent social distancing – triggered by trends in disease surveillance – may allow interventions to be relaxed temporarily in relative short time windows....[Suppression] needs to be in force for the majority [>2/3 of the time] of the 2 years of the simulation.”
	The modeling assumed an IFR of 0.9%, hospitalization rate of 4.4%, and that 81% of the population would be infected before herd immunity, resulting in 510,000 deaths in Great Britain and 2.2 million deaths in the United States by mid-April, surpassing ICU demand by 30X, if lockdowns did not occur.
Imperial College modeling of non-pharmaceutical interventions globally ⁶	“we estimate that in the absence of interventions, COVID-19 would have resulted in 7.0 billion infections and 40 million deaths globally this year... healthcare demand can only be kept within manageable levels through the rapid adoption of public health measures... to suppress transmission... sustained, then 38.7 million lives could be saved.”
	“[Suppression] will need to be maintained in some manner until vaccines or effective treatments become available.”
Imperial College estimate of lives saved so far in Europe ⁷	Used a “model [that] calculates backwards [infections] from observed deaths... [and] relies on fixed estimates of some epidemiological parameters [Ro 3.8; attack rates in different age groups from 60-99%; infection fatality rate in different countries of 0.91-1.26%]....”
	Concluded that “we find, across 11 countries [in Europe], since the beginning of the epidemic [to May 4], 3,100,000 (2,800,000 – 3,500,000) deaths have been averted due to [NPI] interventions....”
Hsiang et al. ⁸	In 5 countries [China, South Korea, Iran, France, US], using “reduced-form economic methods”, NPIs “prevented or delayed [to April 6] on the order of 62 million confirmed cases, corresponding to averting roughly 530 million total infections... we estimate that all policies combined slowed the average growth rate of infections [from 43%/day, a doubling time ~2 days] by -0.252 per day....”

Rethinking the Lockdown Groupthink

Table 2. Some effects of the COVID-19 response that put Sustainable Development Goals out of reach.

Sustainable Development Goal	Effect of COVID-19 Response: some details
Childhood vaccination	Programs stalled in 70 countries [Measles, Diphtheria, Cholera, Polio]
Education	School closures: 90% of students (1.57 Billion) kept out of school <u>-Early primary grades are most vulnerable, with effects into adulthood</u> : effects on outcomes of intelligence, teen pregnancy, illicit drug use, graduation rates, employment rates and earnings, arrest rates, hypertension, diabetes mellites, depression <u>-Not just education affected</u> : school closures have effects on food insecurity, loss of a place of safety, less physical activity, lost social interactions, lost support services for developmental difficulties, economic effects on families
Sexual and reproductive health services	Lack of access: estimated ~2.7 Million extra unsafe abortions For every 3 months of lockdown: estimated 2 Million more lack access to contraception, and over 6 months, 7 Million additional unintended pregnancies
Food security	Hunger pandemic: undernourished estimated to increase 83-132 Million (>225,000/day; an 82% increase) <u>-from disrupted food supply chains [labor mobility, food transport, planting seasons] and access to food [loss of jobs and incomes, price increases]</u>
End poverty	Extreme poverty (living on <US\$1.90/day): estimated to increase >70 Million <u>-Lost “ladders of opportunity” and social determinants of health</u>
Reduce maternal and U5M	Estimated increase of 1.16 Million children (U5M) and 56,700 maternal deaths, if essential RMNCH services are disrupted (coverage reduction 39-52%) for 6 months in 118 LMIC <u>-mostly (~60%) due to affected childhood interventions [wasting, antibiotics, ORS for diarrhea]; and childbirth interventions [uterotonics, antibiotics, anticonvulsants, clean birth]</u>
Infectious Disease Mortality	Tuberculosis: in moderate and severe scenario, projected excess deaths (mostly from reduced timely diagnosis and treatment) 342,000-1.36 Million over 5 years (an increase of 4-16%) Malaria: in moderate and severe scenario, projected excess deaths (mostly from delayed net campaigns and treatment) 203,000 to 415,000 over 1 year (an increase of 52-107%, with most deaths in children <5yo). HIV: in moderate projected excess deaths (mostly due to access to antiretrovirals) 296,000 (range 229,000-420,000) in Sub-Saharan Africa over 1 year (an increase of 63%). Also would increase mother to child transmission by 1.6 times.

LMIC: low- and middle-income countries; ORS: oral rehydration solution; RMNCH: Reproductive Maternal Newborn and Child Health; U5M: under 5 mortality.

References: 78-93

Rethinking the Lockdown Groupthink

Table 3. Some effects of the COVID-19 response on public health in mostly high-income countries.

Effect of COVID-19 Response	Some Details
Delayed/avoided/disrupted medical care	<p>Visits to emergency departments for myocardial infarction or stroke declined in USA by ≥20-48%</p> <p>Delayed cancer care and ‘non-urgent’ procedures</p> <p>-weekly presentations with cancer diagnoses down 46% in USA and UK</p> <p>-90% reduction in non-cancer surgeries in Ontario in March/April</p> <p>-surgery backlog in Ontario March 15 to June 13: 148,000; clearance time estimated to take 84 weeks</p> <p>-in Canada at least \$1.3 billion additional funding is required to return to pre-pandemic wait times for six procedures (CABG, cataract surgeries, hip and knee replacements, MRI and CT scans) within 1 year</p> <p>Of excess deaths in high-income countries during pandemic, 20-50% are <i>not</i> from COVID-19</p> <p>Unexplained 83% increase (10,000 excess) deaths from dementia in England/Wales in April [lack of social contact causing a deterioration in health and wellbeing]</p>
Violence against women [household stress; disrupted livelihoods, social/protective networks, support services]	<p>Intimate Partner Violence: estimated effect from 3 months lockdown is 20% increase_>15 Million additional cases]</p> <p>Female Genital Mutilation: 2 Million more cases over next decade</p> <p>Child Marriages: 13 Million more cases over next decade</p> <p>Increased police reports [France, UK, Ontario] and support line calls [China, Italy, Spain, Vancouver, Alberta] by 20-50%</p>
Deaths of despair [related to unemployment, and due to drugs, alcohol, and suicide]	<p>In USA alone: 68,000 (from 27,000 – 154,000) suicide deaths predicted</p> <p>Mental Health effects of 3 months [suicide, depression, alcohol use disorder, childhood trauma due to domestic violence, changes in marital status, social isolation]: Years of Life Lost in USA 67.58 Million, Canada 7.79 Million, UK 13.62 Million, etc.</p> <p>Surge in Canada in opioid deaths (by 40-50%), alcohol consumption (by 19%), cannabis use (by 8%), tobacco smoking (by 4%), and suicidal thoughts.</p>

References: 97-119

Rethinking the Lockdown Groupthink

Table 4. World mortality data 2019, with COVID-19 mortality to Sept 4 in 2020 for comparison.

Region	Annual deaths in thousands (per day)	Infant mortality Rate/1000	Under 5yo mortality Rate/1000 (% of deaths)	Age 15-60 mortality Rate/1000 (% of deaths)	Age 65+ (% of deaths)
World	58,394 (160)	28	38 (10%)	140 (32%)	(57%)
COVID-19 on Sept 4, 2020	865 (3.5)	(0%)	(0.06%)	(26%)	(74%)
High-income	11,161	4	5 (1%)	81 (19%)	(80%)
Middle-income	41,551	27	35 (9%)	144 (36%)	(55%)
Low-income	5,665	46	68 (31%)	234 (42%)	(27%)
Sub-Saharan Africa	9,052	49	74 (31%)	281 (46%)	(23%)
Canada	291	4	5 (1%)	62 (17%)	(82%)

References: 127,128. Effect of COVID-19 is in bold for emphasis.

Rethinking the Lockdown Groupthink

Table 5. Selected causes of death in the world, with deaths per year and day, compared to COVID-19 in 2020.

Cause of death	Deaths/year (/day)	Case Fatality Rate	Age Group predominant
COVID-19 on Sept 4, 2020	864,618 (3500)	0.24%	≥65-70 years old
Malaria	405,000 (1110)	0.2%	Children
Tuberculosis	1,500,000 (4110)	<15%	-
Measles	140,000 (384)	1.46%	Children
Influenza	389,213 (range 294-518K) ^a	0.01-0.02% for pH1N1	Children 34,800 [13-97K], and ≥65 years old. Respiratory deaths only
HIV	690,000 (1890)	-	Access to treatment for 67%
Motor Vehicle Collisions	1,350,000 (3699)	-	Young 5-29 years old, mostly in Low- to Middle-Income Countries
Tobacco	>8,000,000 (21918)	-	-
Childhood (U5M) pneumonia	808,920 (2216)	-	<5 years old
Childhood (U5M) diarrhea	533,768 (1462)	0.08% U5M	<5 years old
Dietary risk factors	11,000,000 (30137)	-	-

a. The 1957-1959 Influenza pandemic, when the world population was 2.87 billion, was estimated to cause 4 deaths/10,000 population totaling 1.1 million excess deaths due to respiratory disease, with the greatest excess mortality in school-aged children and young adults. If COVID-19 is of similar severity, given the world population of 7.8 billion, we would expect ~3 Million deaths, mostly in the elderly.¹⁴³

K: thousands; U5M: under 5 mortality. Effect of COVID-19 in bold for emphasis. References: 131-143

Rethinking the Lockdown Groupthink

Table 6. Cost-Benefit analysis in WELLBYs for the world’s response to COVID-19

Factor in World	Benefit	Cost
COVID-19 deaths	360M WELLBY	-
Recession	-	1.2B WELLBY
Unemployment	-	280M WELLBY
Loneliness	-	333M WELLBY
Disrupted health services, disrupted education, famine, social unrest, violence, suicide	-	Not counted
TOTAL	360M WELLBY	1.813B WELLBY
BALANCE		5X [minimum]-87X [maximum]

B: Billion; M: Million; WELLBY: wellbeing years. See text for details of the calculations.
Maximum: benefit reduced in half; recession effect increased 12X, unemployment effect increased 3X, and still not counting the disruption of health services, education, life-span effects of loneliness, etc.

Rethinking the Lockdown Groupthink

Table 7. Cost-benefit analysis in Quality Adjusted Life Years for Australia’s response to COVID-19

Consideration	Cost/month	Benefit overall	Comment
Wellbeing (immediate)	83,333 QALY	-	Attributes half of reduction (of 0.5 WELLBY) to lockdown
Reduced economic activity (government services)	25,812 QALY	-	Attributes half of yearly 6% loss in GDP to lockdown, and only government expenditure (not private) buys welfare (36% of GDP), at \$100,000/QALY
Increased suicides	600 QALY	-	Expected to rise 25% over next 5 years, and attributes only 40% of this to lockdown
Disrupted non-university schooling	740 QALY	-	Foregone wages of children: each year of schooling yields approximately 9% more future earnings; assumes 80-90% equivalence of disrupted to normal school days
Disrupted health services, future mental stress and violence	-	-	Not included. Also does not consider bad habits inculcated (reduced physical activity, increased weight gain (for 40%), increased alcohol intake)
Reduced COVID-19 deaths		50,000 QALY	This is for lockdown ‘ad infinitum’ (not per month); 0.04% of population saved
Total over 3 months of lockdown	331,485 QALY	50,000 QALY	Minimum cost is 6.6X any benefit

QALY: Quality Adjusted Life Years; WELLBY: Wellbeing Years. References: 181,182

Rethinking the Lockdown Groupthink

Table 8. A cost-benefit analysis for lockdown in the US, modified from Cutler & Summer.^{184,185}

Factor	Quoted ¹⁸⁴	Revised	Explanation of revision
COST			
GDP loss	\$7.592 Trillion	\$7.592 Trillion ^a	No revision made. Note that, as the US accounts for 15% of world GDP, this translates to the global loss of \$50.6 Trillion (as estimated in Table 6).
Mental Health	0	\$0.8 Trillion	Assuming that 50% of the mental health effect is from lockdowns
BENEFIT			
Deaths avoided	\$4.4 Trillion	\$0.3125 Trillion	Assuming the 625,000 deaths lose 5 QALY each at \$100,000 per QALY. This is better than assuming each death, regardless of age or comorbidity, is the loss of the entire value of a statistical life. This is also how the cost on mental health was calculated.
Health impairment	\$2.6 Trillion	\$0.4875 Trillion	Assuming 35% of quality of life is lost <i>for the remaining years left</i> [likely 15 remaining years of 80 on average in a statistical life].
Mental Health	\$1.6 Trillion	\$0.8 Trillion	Assuming 50% of the mental health effects are due to not having lockdowns to prevent COVID-19 cases.
Cost-benefit balance	Benefit 1.3X Cost	Cost 5.2X Benefit	A minimal estimate: the GDP loss will likely be higher; willingness to pay for QALY is usually <\$100,000/QALY, and NICE uses \$30,000/QALY; not all deaths could be avoided by lockdown; at least 20% of excess deaths are not due to COVID-19 (i.e., are more likely from the response); severe cases (i.e., those that do not need intensive care, and may only need oxygen) likely have lower risk for health impairment of the severity modeled.

a. If the Value of a Statistical Life is accepted as used in the reference at \$7 million, and the US economy will lose \$7.592 Trillion in GDP over the decade, that is equivalent to the loss of 1,084,571 whole (statistical 80-year duration) lives = 86,765,680 years of lost life; that is equivalent to (assuming 5 QALY lost per COVID-19 death) **17,353,136 COVID-19 deaths**.

Rethinking the Lockdown Groupthink

Table 9. Other calls for a change in COVID-19 response priorities

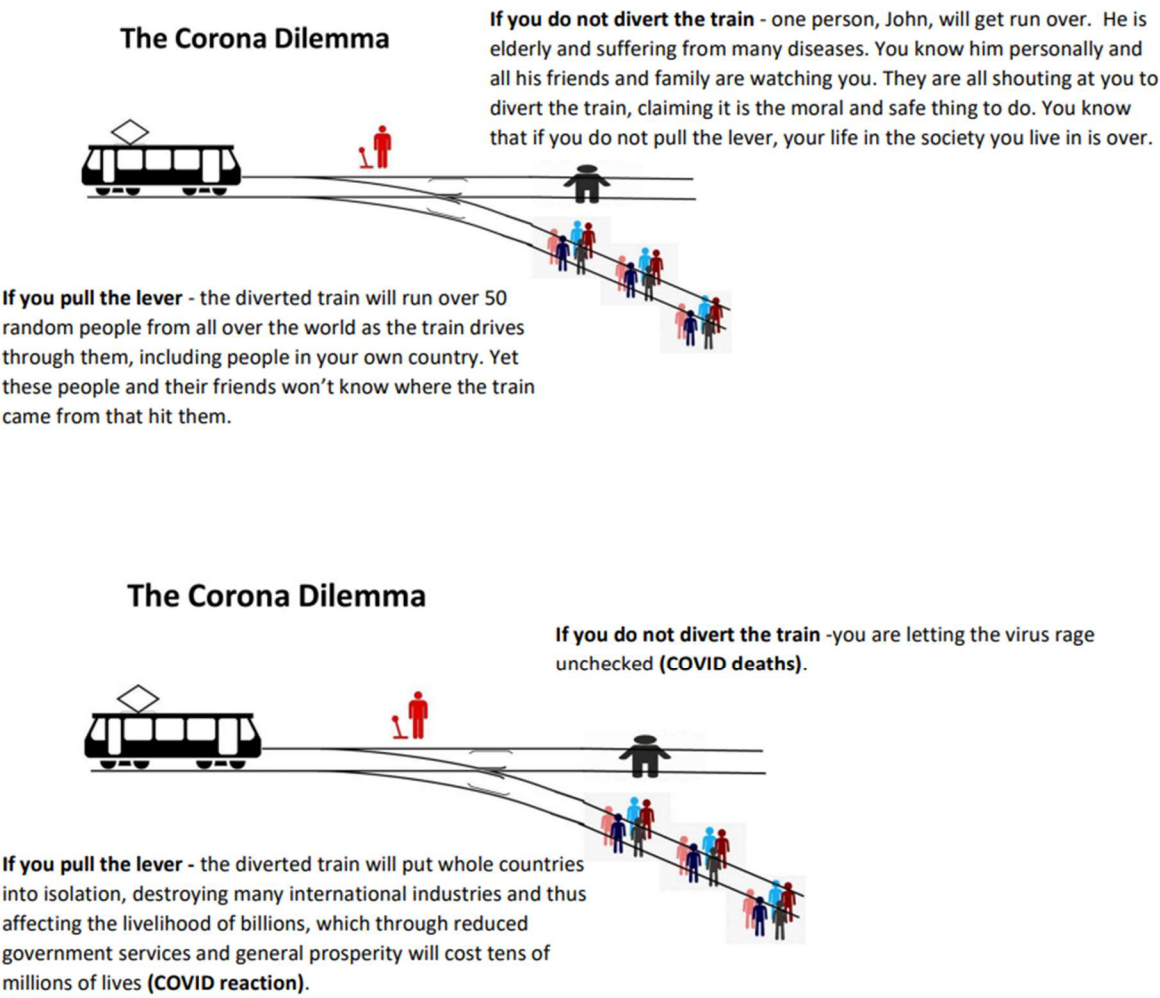
Reference	Content of the call for adjusting COVID-19 response priorities
Open letter on July 6, 2020, to the Prime Minister and Premiers of Canada ²¹³	The current approach “carries significant risks to overall population health and threatens to increase inequalities... Aiming to prevent or contain every case of COVID-19 is simply no longer sustainable... We need to accept that COVID-19 will be with us for some time and to find ways to deal with it.”
	The response risks “significantly harming our children, particularly the very young, by affecting their development, with life-long consequences in terms of education, skills development, income and overall health.”
	Suggest that we need “to focus on preventing deaths and serious illness by protecting the vulnerable while enabling society to function and thrive... While there is hope for a vaccine to be developed soon, we must be realistic about the time... We need to accept that there will be cases and outbreaks of COVID-19.”
	“Canadians have developed a fear of COVID-19. Going forward they have to be supported in understanding their true level of risk... while getting on with their lives – back to work, back to school, back to healthy lives and vibrant, active communities....”
	COVID-19 “is not the only nor the most important challenge to the health of people in Canada... The fundamental determinants of health – education, employment, social connection and medical and dental care – must take priority...”
Open letter to National Cabinet of Australia ²¹⁴	“exposure to COVID-19 is only temporarily avoidable”; “to analyze the COVID-19 effect it is necessary to understand it as shortening life. But the lockdowns and the panic have also had a cost in shortening life for others.”
	Some of these costs include that the lockdown: “will decrease national income... and this will have a measurable effect on the length of the average lifespan”, “[has] disrupted normal health services... estimated an increase in cancer deaths over the next 12 months of 20%”, [and will cause] future suicides by the unemployed and others whose lives have been ruined.”
	Urge for “a cost-benefit analysis, including lives saved versus lives lost, both directly and consequentially... [and] weekly or daily non-epidemic death figures should be posted as well as deaths from the epidemic...”
Ioannidis, JPA ^{95,215-219}	Called for evidence to guide policy, noting many of the collateral and recession effects discussed above.
	“Shutdowns are an extreme measure. We know very well that they cause tremendous harm.”
	“the excess deaths from the measures taken is likely to be much larger than the COVID-19 deaths... learning to live with COVID-19 and using effective, precise, least disruptive measures is essential to avoid such disasters and to help minimize the adverse impact of the pandemic” ⁹⁵
	“When major decisions (e.g., draconian lockdowns) are based on forecasts, the harms (in terms of health, economy, and society at large) and the asymmetry of risks need to be approached in a holistic fashion, considering the totality of the evidence.” ²¹⁹

Rethinking the Lockdown Groupthink

Resignation letter by economist in Victorian Treasury ²²⁰	“the pandemic policies being pursued in Australia... are having hugely adverse economic, social and health effects... The need for good policy process does not disappear just because we face a public health crisis... the elderly are many times more vulnerable to a serious outcome than the young. It was necessary, therefore, to work out a targeted age-based strategy... The direct and indirect costs imposed by regulatory approaches may not be... immediately obvious. Risk regulation that is poorly targeted or costly will divert resources from other priorities... needed to commission a cost-benefit analysis of alternative policy options....”
	Governments should have realized “they are hostage to chronic groupthink and actively sought alternative advice... instead of performing its taxpayer-funded duty of providing forthright analysis of alternatives... can (even now) be managed by isolating the elderly and taking a range of voluntary, innovative measures.”
The Great Barrington Declaration ²²¹	“current lockdown policies are producing devastating effects on short and long-term public health... leading to greater excess mortality in years to come... keeping students out of school is a grave injustice... The most compassionate approach that balances the risks and benefits of reaching herd immunity, is to allow those who are at minimal risk of death to live their lives normally to build up immunity to the virus through natural infection, while better protecting those who are at highest risk.”

Rethinking the Lockdown Groupthink

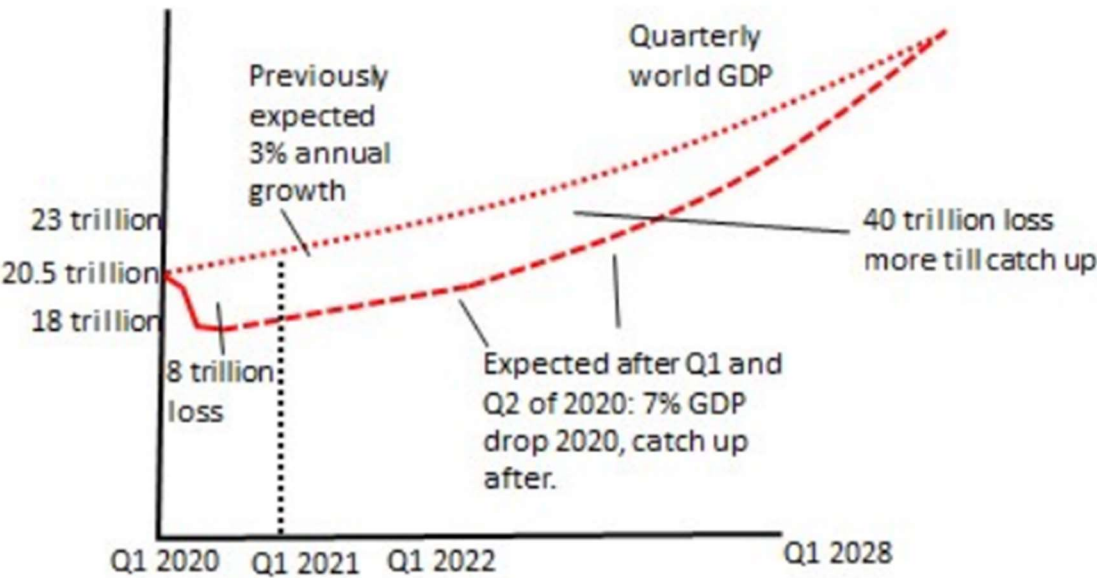
Figure 1a and 1b



Rethinking the Lockdown Groupthink

Figure 2

Previously projected GDP and later projected GDP: one-year loss versus cumulative loss



Rethinking the Lockdown Groupthink

ETable 1. Total and COVID-19 deaths in the USA, as of August 22, 2020.

Age group	COVID deaths in 6 months to Aug 22	Deaths from all causes to Aug 22	COVID as % of deaths in 2020
0-14	57	14679	0.39%
15-24	280	18594	1.51%
25-44	4558	93066	4.90%
45-54	8648	100926	8.57%
55-64	20655	231983	8.90%
65-74	34980	351806	9.94%
75-84	43392	430582	10.08%
85+	51710	537185	9.63%
TOTAL	164280	1778821	9.24%

Assumes all deaths *with* COVID-19 are deaths *from* COVID-19.
Reference: 123

Rethinking the Lockdown Groupthink

ETable 2. COVID-19 deaths in Canada as of August 30, 2020 compared to deaths in 2018.

Age group	COVID deaths in 6 months of 2020	Deaths in all of 2018	COVID as % of deaths over 6 months of 2020
0-19	1	3092	0.06%
20-29	9	3273	0.55%
30-39	15	4455	0.67%
40-49	50	7287	1.35%
50-59	211	19959	2.07%
60-69	651	40231	3.13%
70-79	1635	60143	5.16%
80+	6420	146266	8.07%
TOTAL	8992	283706	5.96%

In 2018 there were 23642 deaths/month and 777 deaths/day in Canada.
References: 124, 125

Rethinking the Lockdown Groupthink

ETable 3. Studies suggesting that efficacy of nonpharmaceutical interventions to prevent spread of COVID-19 are not as high as some predicted.

Study	Details of efficacy of non-pharmaceutical intervention
Luskin DL ¹⁴⁹	Using “highly detailed anonymized cellphone tracking data provided by Google... tabulated by the University of Maryland’s Transportation Institute into a ‘social distancing index’”, it was found that lockdown severity correlated with a greater spread of the virus, even when excluding states with the heaviest caseloads, and not with population density, age, ethnicity, prevalence of nursing homes, or general health, suggesting that “[heavy] lockdowns probably didn’t help.”
	This analysis also found that states that subsequently opened-up the most tended to have the lightest caseloads, suggesting that “opening up [a lot] didn’t hurt.”
Atkeson A, et al. ¹⁵⁰	An analysis across 23 countries and 25 states each with >1000 deaths by July 22 found that the growth rates of daily deaths from COVID-19 fell rapidly [from a wide range of initially high levels - doubling every 2-3 days] within the first 30 days after each region reached 25 cumulative deaths, and has hovered around zero or slightly below since.
	Epidemiological models found that this implied both the Re and transmission rates fell rapidly from widely dispersed initial levels [Re≥3], and the Re has hovered around 1 after the first 30 days of the epidemic virtually everywhere in the world.
	The authors suggest that there must be “an omitted variable bias” accounting for this finding [and similar findings in previous pandemics], that the role of region-specific NPI’s implemented in the early phase of the pandemic is likely overstated, and that the removal of lockdown policies has had little effect on transmission rates.
Chaudhry R, et al. ¹⁵¹	A study using data from the top 50 countries ranked by number of cases found that “rapid border closures, full lockdowns, and wide-spread testing were not associated with COVID-19 mortality per million people.”
Wood SN ¹⁵²	A mathematical model using “a Bayesian inverse problem approach applied to UK data on COVID-19 deaths and the disease duration distribution” suggested that “infections were in decline before the full UK lockdown (March 24), and that infections in Sweden started to decline only a day or two later.”
Chin V, et al. ¹⁵³	The model for Europe used in [7] was based on circular reasoning [i.e., having modelled Re “as a step function and only allowed to change in response to an intervention”]. Using a model allowing for gradual changes over time and better fitting the data, complete lockdown had “no or little effect, since it was introduced typically at a point when Rt was already low.” For example, when lockdown was adopted in the UK, “Rt had already decreased to 1.46.” In fact, “lockdown and event ban had similar effect sizes on the reduction of Rt”. Overall, “one cannot exclude that the attribution of benefit to complete lockdown is a modelling artefact.”
Homburg S, Kuhbandner C. ¹⁵⁴	The model in [7] used circular reasoning [“the purported effects are pure artefacts”] by “using as an a priori restriction that Rt may only change at those dates where interventions become effective.” In the UK “the growth factor had already declined... strongly suggests that the UK lockdown was both superfluous... and ineffective.” In addition, the attribution of the decline in Sweden’s Rt to banning of public events is odd because that was an “NPI that they found ineffective in all other countries.”
Islam N, et al. ¹⁵⁵	Implementation of any physical distancing intervention [including lockdown] was associated with an overall reduction in COVID-19 incidence of only 13% [IRR 0.87, 95% CI 0.85 to 0.89] in 149 countries. There was no effect on this estimate of days since the first reported case of COVID-19 until the first implementation of physical distancing policies.

Rethinking the Lockdown Groupthink

ETable 4. Cost-benefit analysis in WELLBYs for Canada's response to COVID-19

Factor in Canada	Benefit per month	Cost per month
COVID-19 deaths	37.59M X 0.5 for herd X 0.003 IFR X 5 QALY/ 12 months = 23,494 QALY = 140,963 WELLBY	-
Recession	-	(1.713T GDP/12 months X 0.15 GDP loss X 0.4 government spending)/100K = 85,650 QALY = 513,900 WELLBY
Unemployment	-	2M X 0.7/12 months = 116,667 WELLBY
Loneliness (if we end half of lockdown)	-	37.59M/2 X 0.5/12 months = 783,125 WELLBY
Disrupted health services, disrupted education	-	Not counted
TOTAL	0.141M WELLBY	1.41M WELLBY
BALANCE		10X [minimum]

IFR: infection fatality rate; K: thousands; M: Million; QALY: quality adjusted life years; WELLBY: wellbeing years



587.892.7874 | aapg.ca



310.AUMA | auma.ca



780.955.3639 | RMAAlberta.com

January 29, 2021

Honourable Kaycee Madu
Minister of Justice and Solicitor General
424 Legislature Building
10800 - 97 Avenue NW
Edmonton, AB T5K 2B6

Dear Minister Madu:

On behalf of the Alberta Police Interim Advisory Board, please find attached the Board's report on recommendations for 2021-22 policing priorities. This report fulfills the following two mandate items from the Board's Terms of Reference:

- *Provide a report detailing the Interim Board's recommendations and advice on the JSJ/RCMP "K" Division Multi-year Financial Plan by January 31, 2021; and*
- *Provide a report detailing the Interim Board's recommendations and advice on provincial policing priorities by January 31, 2021.*

Please note that we have combined our recommendations on the multi-year financial plan and provincial policing priorities into the same document.

Thank you again for the opportunity to provide these recommendations. We would be happy to meet with you if you would like to discuss our recommendations in greater detail. The Board is now working on creating the governance recommendations for the operational Board to complete our final mandate items.

If you have any questions or suggestions at this time, please feel free to contact me at tthorn@okotoks.ca.

We look forward to engaging with you soon!

Sincerely,

A handwritten signature in black ink, appearing to be 'Tanya Thorn', with a long horizontal flourish extending to the right.

Tanya Thorn
Chair
Alberta Police Interim Advisory Board

cc: Paul McLaughlin, President, Rural Municipalities of Alberta
Barry Morishita, President, Alberta Urban Municipalities Association
Terry Coleman, Chair, Alberta Association of Police Governance
Deputy Commissioner Curtis Zablocki, "K" Division RCMP
Marlin Degrand, Justice & Solicitor General

Encl: (2)



ALBERTA POLICE INTERIM ADVISORY BOARD

Report on Municipal Policing Priorities

January 2021

Contents

Executive Summary.....	2
Introduction	5
Stakeholder Engagement.....	6
Engagement Themes: What We Heard	6
Municipal Policing Priorities	8
Next Steps and Implementation	16
Appendix 1 – Alberta Police Interim Advisory Board Terms of Reference	17
Appendix 2 – Alberta Police Interim Advisory Board Membership.....	22
Appendix 3 – Alberta Police Interim Advisory Board Survey.....	23

Executive Summary

The Alberta Police Advisory Board was created by the Minister of Alberta Justice and Solicitor General in spring 2020 to give municipalities served by the Provincial Police Service Agreement (PPSA) a strong voice in setting policing priorities. One of the Board's mandated deliverables was to provide input into discussions on provincial policing priorities for the 2021/22 fiscal year. This report fulfills that mandate and is also intended to be used to inform the Government of Alberta/RCMP multi-year financial plan.

The Board has developed eight municipal policing priorities and related recommendations. These priorities and recommendations are of equal importance to municipalities.

Priority	Recommendations
Develop a coordinated, long-term strategy to ensure that all vacant frontline detachment positions are filled.	<ul style="list-style-type: none">• Work with the Alberta Police Advisory Board to identify and prioritize vacancies and gaps in service in both Provincial Police Service Agreement (PPSA) and Municipal Police Service Agreement (MPSA) municipalities. This would include determining what factors should be considered in making resourcing decisions, as well as the relative importance of each factor.• Develop clear and consistent communication processes with municipalities around vacancies, including information on when and how they will be filled.
Update the detachment resourcing methodology to ensure that resourcing decisions reflect community needs.	<ul style="list-style-type: none">• Work with the Alberta Police Advisory Board to review resourcing methodology to ensure it reflects community need, particularly at the local level. This may include both enhancing direct RCMP engagement with local communities, and working with the Alberta Police Advisory Board to refine resourcing methodology based on the local input gathered.• Work with the Alberta Police Advisory Board to improve communication with municipalities so that they understand how resources are allocated, as well as the value of centralized, specialized, and civilian positions.
Increase efforts to target repeat offenders committing crimes in rural and small urban municipalities.	<ul style="list-style-type: none">• Collaborate with the Alberta Police Advisory Board to develop ways in which repeat offender-related strategies and information can be consistently and effectively communicated between detachments and municipalities or police advisory bodies, and how such discussions can then be further communicated to CRUs.• Improve reporting to municipalities and the public on what constitutes a "repeat offender" and the strategies being undertaken by the RCMP to address repeat offenders, especially in rural and small urban municipalities.
Work with municipal and community leaders to identify	<ul style="list-style-type: none">• Collaborate with the Alberta Police Advisory Board to develop best practices and standards for detachments to follow to

local priority enforcement areas and use this information to determine detachment and regional crime reduction strategies.	<p>improve collaboration and engagement with small municipalities.</p> <ul style="list-style-type: none"> Recognize different rural and urban crime priority areas and use this information to inform local, regional, and provincewide policing priorities and strategies.
Continue to support detachments in conducting proactive policing and community engagement through the increased use of Crime Reduction Units, Call Back Units, and other resources that will allow frontline officers to increase their presence in the community.	<ul style="list-style-type: none"> Collaborate with the Alberta Police Advisory Board to develop meaningful definitions and measures of proactive policing and community visibility that are relevant in both urban and rural municipalities. Determine how the continued growth of specialized units will directly support improved frontline policing (including proactive policing and community visibility) in rural and small urban municipalities. Collaborate with the Alberta Police Advisory Board to develop messaging on how to better communicate the proactive policing initiatives already underway to support improved rural police services.
Provide the Alberta Police Advisory Board with adequate and consistent financial and administrative support.	<ul style="list-style-type: none"> That Alberta Justice and Solicitor General allocate a portion of revenues collected annually through the police costing model to provide required administrative funding for the Alberta Police Advisory Board before transferring funding to the RCMP. Collaborate with the Interim Board to determine long-term board costs and administrative requirements in order to inform the funding allocation.
Work with the Alberta Police Advisory Board to develop best practices to enhance the quality and consistency of communication and collaboration between detachments and the municipalities that they serve.	<ul style="list-style-type: none"> Collaborate with the Alberta Police Advisory Board (possibly through the formation of a sub-committee involving RCMP, Government of Alberta, and Board members) to develop communication and collaboration best practices and approaches in the following areas: <ul style="list-style-type: none"> How to form relationships with municipal leaders How to effectively report to and update municipalities about policing in the community How to work with municipalities to identify and engage community leaders, including those from racialized and/or under-represented communities How to maintain collaboration following changes in detachment and/or municipal leadership
Work with community and municipal leaders to address racism and other forms of discrimination in policing.	<ul style="list-style-type: none"> Develop measurable detachment-level requirements for engaging with local racialized and/or under-represented communities. Collaborate with municipalities and other leading community organizations to raise awareness of and respond to local social justice issues.

	<ul style="list-style-type: none"> • Collaborate with the Alberta Police Advisory Board to develop initiatives that will support detachments in undertaking this action.
--	---

As the role of the Alberta Police Advisory Board is to provide recommendations to the RCMP and Alberta Justice and Solicitor General, it is ultimately the responsibility of the provincial government and “K” Division leadership to decide whether to accept the Board’s recommendations, and if so, how to integrate them into existing planning processes and strategic initiatives.

The Board would be pleased to meet with RCMP and Alberta Justice and Solicitor General leadership to discuss the priorities identified in this report, and how all three groups can work together towards effective implementation.

Introduction

The Minister of Justice and Solicitor General established the Alberta Police Advisory Board in spring 2020 to give municipalities served by the Provincial Police Service Agreement (PPSA)¹ a strong voice in setting policing priorities. As the order of government closest to its citizens, municipalities are well-positioned to help the RCMP identify and address community policing² and public safety issues. The Board can therefore play an important role in ensuring that policing reflects the needs and concerns of Albertans across the province.

The Alberta Police Advisory Board is being implemented in two phases: in the first year, an interim Board is developing the Board's structure and scope. On the completion of the interim Board's mandate, the work of the operational Board will begin for a four-year term. As per the Terms of Reference developed by Alberta Justice and Solicitor General (Appendix 1), the Interim Board is made up of four representatives from the Rural Municipalities of Alberta (RMA) Board, four representatives from the Alberta Urban Municipalities Association (AUMA) Board, and one representative from the Alberta Association of Police Governance Executive. A list of the current interim Board members is provided in Appendix 2.

The Interim Board has been mandated to:

1. Develop the scope and terms of reference for the operational Board.
2. Develop a recruitment and selection process for operational Board members.
3. Develop governance documents for the operational Board, including at minimum, a Competency Matrix for Board member appointments and review, a Code of Conduct, and a Mandate and Roles Document.
4. Provide input, advice, and recommendations to the provincial government and RCMP "K" Division on the buildup of the provincial police service.
5. Provide input into discussions on provincial policing priorities for the 2021/22 fiscal year to facilitate engagement during transition to the operational Board.

This report contains the Interim Board's recommendations and advice on provincial policing priorities for the 2021/22 fiscal year (Mandate Item 5). The report is also intended to be used to inform the Government of Alberta/RCMP Multi-Year Financial Plan.

¹ Under the *Police Act*, the Government of Alberta is responsible for providing police services to urban municipalities with populations of 5,000 or less and all municipal districts and counties. The provincial government meets this obligation by contracting the RCMP to deliver police services to these municipalities through the Provincial Police Service Agreement (PPSA). This agreement is negotiated and signed by the provincial and federal governments.

² Community policing is a philosophy that promotes organizational strategies that support the systematic use of partnerships and problem-solving techniques to proactively address the immediate conditions that give rise to public safety issues such as crime, social disorder, and fear of crime.

Stakeholder Engagement

Since its establishment, the Alberta Police Interim Advisory Board has been engaging with key stakeholders to gather information and develop recommendations on policing priorities.

The Board distributed a survey to municipalities in fall 2020 to learn more about municipal perspectives on policing (see survey questions in Appendix 3). This survey received 209 responses from 160 different municipalities. The Board also solicited input from municipalities through email and in person at RMA and AUMA events. Municipal feedback provided the foundation for the recommendations in this report.

Additionally, the Board met multiple times with RCMP “K” Division and Alberta Justice and Solicitor General to learn about current policies and processes related to planning, budgeting, and resource allocation for the provincial police service. This included reviewing the policing priorities and performance measures identified by the RCMP and Alberta Justice and Solicitor General in their 2018-2021 Joint Business Plan.

Engagement Themes: What We Heard

The Alberta Police Interim Advisory Board received a wide range of feedback from municipalities on how to enhance policing in Alberta. While quantitative analysis of survey results has been invaluable in helping the Board determine policing priorities for municipalities, several broader themes also emerged through qualitative analysis. Some of these themes highlight broad, societal issues that the RCMP cannot resolve alone, but should consider in both their strategic planning and day-to-day operations. Other themes focus on specific policing areas that the RCMP can address directly. The Board was pleased to note that these themes are generally aligned with some of the priorities outlined in the existing Alberta Justice and Solicitor General/RCMP 2018-2021 Joint Business Plan, indicating a degree of agreement between municipalities, the provincial government, and the RCMP on future goals and directions for policing in Alberta.

Systemic Resource Constraints

Municipalities have consistently highlighted resource constraints in the provincial health, policing, and justice systems as a key barrier to effective policing. Municipalities do not expect to have a hospital, police detachment, and courthouse in every community in Alberta; however, all Albertans must have equitable access to health, police, and justice services and these services must be appropriately resourced in order to be effective. While the RCMP is now in a position to increase its resources as a result of additional funding raised through the new police costing model, their effectiveness will continue to be limited as long as there are vacancies and gaps in the health and justice systems. It is important to note that both the justice and healthcare systems fall under provincial jurisdiction, and municipal governments have a limited role in provincial policy, planning, and decision-making for these systems. Additionally, given fiscal constraints and limited mechanisms for raising revenue, municipalities are not able to fill in gaps in provincial funding.

Crime Reduction and Prevention

As crime and the costs of policing continue to be a key issue in both rural and urban communities, municipalities have identified the need to focus on crime prevention and reduction by resolving the root causes of crime. There is considerable research showing that early intervention and prevention with youth, families, and schools reduces violent crime in a cost-effective way: crime can be prevented by responding as soon as possible when people have risk factors such as addiction, loss of employment, or mental illness. While most early intervention and prevention programs fall under provincial jurisdiction, there is a role for the RCMP to play in cross-agency collaboration with various stakeholders and levels of government to identify the root causes of crime at a community level, pool resources, and coordinate responses. Municipalities do play a role in delivering preventative social supports through the Family and Community Support Services (FCSS) program; in fact, more than half of the municipalities participating in this program pay more than the required municipal cost share for the program. However, municipalities are limited by legislation that prevents FCSS programs from duplicating any provincial services.

Outcome Accountability

Municipalities expect the RCMP to operate according to prescribed accountability and governance frameworks. Many municipalities identified the need for a more transparent, collaborative approach to assessing RCMP performance that is based on the identification of policing and public safety goals through a closer working relationship between the RCMP and their primary stakeholders, particularly municipalities, which are well-positioned to identify community safety issues. Once such goals are identified, appropriate indicators should be created for assessing whether progress is being made towards achieving these goals, and regular reporting processes should be established. Municipalities are cognizant of the additional resources required to support organizational effectiveness and outcome accountability, and they acknowledge the tension inherent in balancing corporate support and centralized positions with “boots on the ground”. However, a collaborative and transparent approach to RCMP performance assessment that engages stakeholders more directly in goal identification and outcome measurement can lead to more successful, responsive, and accountable policing.

Social Justice

Recent events such as the National Inquiry into Missing and Murdered Indigenous Women and Children, the Black Lives Matter movement, and the Merlo-Davidson settlement underscore the need to address systemic discrimination in civil society, and the role of police in both perpetuating this discrimination and combatting it. All civil institutions, including municipal governments and police services, must work in partnership with marginalized populations to address discrimination both internally and in their interactions with the citizens they serve. To ensure public confidence in policing, municipalities support improved civilian oversight and transparency, particularly for complaints and disciplinary reviews, as well as recruitment and training initiatives that focus on diversity and inclusion.

Municipal Policing Priorities

Based on stakeholder feedback, the Alberta Police Interim Advisory Board has developed eight municipal policing priorities and related recommendations to inform discussions on provincial policing priorities for the 2021/22 fiscal year. These priorities and recommendations are of equal importance to municipalities and are grouped by the themes identified in the previous section.

Systemic Resource Constraints

Priority 1: Develop a coordinated, long-term strategy to ensure that all vacant frontline detachment positions are filled.

Albertans need to feel safe and protected in their communities. AUMA, RMA, and the Alberta Association of Police Governance have consistently heard from their members that RCMP vacancy rates and long response times contribute to the perception that some communities are not safe. This feedback has been validated by the responses to the Board's fall 2020 municipal survey, which identified the following three service issues as the most important for municipalities:

- Filling vacancies and providing full coverage service
- 911 response times
- Community visibility

Only cities were likely to indicate an "other" issue as most important; otherwise, all sizes, districts, and types of municipalities agreed on the above issues as their most important.

These service issues reflect an overall lack of resources; accordingly, the Board supports allocating additional police resources to improve policing services; address rising crime rates; and enable community crime prevention and diversion initiatives. The Board was therefore pleased to see the RCMP's announcement that the new police costing model will result in additional resources for the RCMP for 2020/21, specifically 76 new police officers and 57 new civilian support positions. Additionally, the RCMP has shared information with the Board on potential resourcing initiatives that include:

- 24-hour coverage in all PPSA locations
- The creation of a relief team to be deployed to detachments that are experiencing short term human resource shortages
- District general duty resources that would provide district commanders with the flexibility to deploy resources to areas of need

RECOMMENDATIONS:

- Work with the Alberta Police Advisory Board to identify and prioritize vacancies and gaps in service in both Provincial Police Service Agreement (PPSA) and Municipal Police Service Agreement (MPSA) municipalities. This would include determining what factors should be considered in making resourcing decisions, as well as the relative importance of each factor.
- Develop clear and consistent communication processes with municipalities around vacancies, including information on when and how they will be filled.

Priority 2: Update the detachment resourcing methodology to ensure that resourcing decisions reflect community needs.

The RCMP currently determines how to allocate policing resources by analyzing each detachment's workload. This analysis takes several factors into account, including travel time, call volume, type of crimes occurring in the area, amount of time required for investigations, size of detachment, and time available for proactive policing. When asked to rank which factors were most important to their municipality, survey respondents identified travel time as by far the most significant factor (43%), followed by the types of crime in the area (29%), then time available for proactive policing (12%). Call volume, detachment size, and investigative time required were seen as less important. Rural and small urban municipalities (municipal districts, villages, and summer villages; populations under 5,000) tended to prioritize travel time over type of crime when compared to larger urban municipalities (cities and towns; populations over 5,000), although both were considered important. This likely reflects the fact that rural and small urban municipalities tend to be further away from detachments than larger municipalities.

Additionally, 70% of respondents either agreed or strongly agreed that resource allocation should be balanced between frontline officers and centralized, specialized, or civilian positions.

RECOMMENDATIONS:

- Work with the Alberta Police Advisory Board to review resourcing methodology to ensure it reflects community need, particularly at the local level. This may include both enhancing direct RCMP engagement with local communities, and working with the Alberta Police Advisory Board to refine resourcing methodology based on the local input gathered.
- Work with the Alberta Police Advisory Board to improve communication with municipalities so that they understand how resources are allocated, as well as the value of centralized, specialized, and civilian positions.

Crime Reduction and Prevention

Priority 3: Increase efforts to target repeat offenders committing crimes in rural and small urban municipalities.

Repeat offenders are a major issue in rural and small urban municipalities across Alberta. Anecdotally, many municipal leaders have indicated that most of the criminal activity occurring within their communities is due to a small group of individuals that frequently re-offend. Survey results highlight the importance that municipal leaders place on addressing repeat offenders, particularly in rural municipalities and specialized municipalities. This may indicate a specific link between repeat offenders and property crimes common in rural areas with a limited police presence.

Although a complete strategy to effectively focus on and reduce the rate of prolific and repeat offenders includes reforms to social supports and the justice system that are beyond the scope of the Alberta Police Advisory Board, there are ways in which policing approaches at the detachment, regional and province-wide level could better address repeat offenders.

The Alberta Justice and Solicitor General/RCMP 2018-2021 Joint Business Plan includes a key initiative under the "crime reduction" priority to establish "specialized crime reduction units focused on targeting

repeat offenders.” It is the Board’s understanding that the first crime reduction unit (CRU) was formed in Alberta in 2017 as a pilot project, and four CRUs are currently in place in the province. The Board supports the CRU model as a key tool to address prolific offenders and appreciates that the RCMP has identified expanding the use of CRUs as a potential 2021 resourcing initiative.

According to the Civilian Review and Complaints Commission’s (CRCC) March 2020 *Review of the RCMP’s Crime Reduction-Type Units*, Alberta’s CRUs collaborate “with the provincial agencies responsible for health, housing, addictions and human services both at the working and senior levels, including the provincial deputy minister level.” While this collaboration between CRUs and provincial agencies is a positive, the report lacks any reference to CRUs attempting to work with municipalities, municipally operated social service organizations (such as Family and Community Support Services), community peace officers, or local non-profit agencies that may provide support to those at high risk of becoming repeat offenders. As many rural and small urban communities have little or no direct provincial agency presence, it is imperative that CRUs increase their collaboration with non-provincial entities that may play a role in both preventing individuals from becoming repeat offenders and helping to identify possible repeat offenders within these communities.

RECOMMENDATIONS:

- Collaborate with the Alberta Police Advisory Board to develop ways in which repeat offender-related strategies and information can be consistently and effectively communicated between detachments and municipalities or police advisory bodies, and how such discussions can then be further communicated to CRUs.
- Improve reporting to municipalities and the public on what constitutes a “repeat offender” and the strategies being undertaken by the RCMP to address repeat offenders, especially in rural and small urban municipalities.

Priority 4: Work with municipal and community leaders to identify local priority enforcement areas and use this information to determine detachment and regional crime reduction strategies.

Survey results showed that while some categories of criminal activity are priorities in municipalities of all types, sizes, and regions of Alberta, there are noticeable differences in how important other types of crime were viewed by different survey respondents. For example, although “major property crime” was clearly identified as the most important crime category for Alberta’s municipalities overall, it was ranked as relatively low among town and city respondents (larger urban municipalities) and as very high among rural municipalities, summer villages, and villages. Conversely, towns and villages ranked drug-related offences as a much higher priority than respondents representing rural and small urban municipalities. Similarly, family violence was ranked as a higher priority by larger municipalities, while property crime was less of a priority.

What these results suggest is that while both drug offences and property crimes impact communities of all types and sizes, the **direct** impacts of each likely differ. This data could be interpreted to suggest that individuals committing drug crimes in towns and villages (where they likely live) may be travelling to rural and small urban municipalities to commit property crimes linked to drug sales or use. This is a significant assumption, but it speaks to the larger issue: crime is a major concern in communities across the province, but its specific impacts differ based on municipal size and type.

While the survey results indicate broad differences in priority crime areas among municipalities of different types and sizes, it is likely that priority issues vary by individual municipality. For this reason, ongoing, quality collaboration between detachments and municipal/community leaders is essential to ensure that those policing the community understand the concerns and priorities of community residents and businesses. In larger municipalities where both police and municipal governments may have the time and capacity to regularly interact, this may be straightforward. However, in smaller municipalities, limited police and municipal capacity may mean that collaboration is more difficult. The impacts of municipal size on collaboration are supported in the survey results. The table below contrasts the overall survey responses to the responses of municipalities with a population below 2,000 on several questions related to police/municipal collaboration.

Question	Alberta overall	Municipalities with population below 2,000	Municipalities with population above 2,000
Does your municipality have a police oversight body?	27.5% said yes	19.4% said yes	36.0% said yes
How often does your municipality/police oversight body meet with your detachment commanders?	58.6% meet two times or more	39.6% meet two times or more	77.1% meet two or more times
Do you consider your current meeting frequency with RCMP detachment commanders sufficient?	65% said yes	56% said yes	73.0 said yes
Does your RCMP detachment provide you with a copy of their annual performance plan (APP)?	66% said yes	59% said yes	74.2% said yes
Is your municipality or police oversight body involved in developing the detachment's APP?	55% said yes	35% said yes	60.2% said yes
Does your municipality or police oversight body receive regular reporting from your detachment?	82% said yes	70% said yes	95.3% said yes

What the results above suggest is that collaboration between small municipalities and their detachments is consistently lower than collaboration between detachments and municipalities in general. This inconsistency likely flows upwards into the policing-related priorities of small and rural municipalities being under-considered in RCMP regional and province-wide priority-setting.

While Alberta's *Police Act* places the onus on municipalities to form police committees as a formal means to collaborate with their local detachment, it is not the only way. The results above clearly show that detachments often meet with municipal councils regardless of whether the municipality has a standalone police committee. However, the results also show that the level of engagement requires improvement, especially in small municipalities, nearly half of which consider their current meeting frequency with their detachments to be insufficient.

RCMP and Alberta Justice and Solicitor General should emphasize the development of detachment standards for engagement with the municipalities they serve. Alberta Police Interim Advisory Board members have regularly heard from municipal leaders that municipal-detachment engagement is often “personality-driven,” as it is almost entirely dependent on the willingness of a particular detachment commander to take the time to work with municipal leaders. In many cases, municipalities have formed strong relationships with a detachment, only to see them evaporate when the detachment’s leadership shifts.

The Alberta Justice and Solicitor General/RCMP 2018-2021 Joint Business Plan makes some indirect references to improving community engagement, including the need to develop strategies for “local partnerships” within detachment Annual Performance Plans, and “improve the way in which the RCMP connect with, involve, and inform communities to ensure the public is receiving a prompt response to criminal complaints and a positive service experience.” However, neither of these initiatives specifically addresses the need to better inform and engage municipalities, which is especially important in small communities in which the municipality is often most knowledgeable of local concerns and trends.

RECOMMENDATIONS:

- Collaborate with the Alberta Police Advisory Board to develop best practices and standards for detachments to follow to improve collaboration and engagement with small municipalities.
- Recognize different rural and urban crime priority areas and use this information to inform local, regional, and provincewide policing priorities and strategies.

Priority 5: Continue to support detachments in conducting proactive policing and community engagement through the increased use of Crime Reduction Units, Call Back Units, and other resources that will allow frontline officers to increase their presence in the community.

The Alberta Justice and Solicitor General/RCMP 2018-2021 Joint Business Plan includes a strategy to create specialized units, along with the Police Reporting and Occurrence System (PROS) data centre, to increase the amount of time available to frontline police officers for proactive policing and community engagement.

The Alberta Police Interim Advisory Board is highly supportive of this existing strategy and recommends that the RCMP continue to dedicate resources to forming and expanding the use of specialized units to address and respond to crime, which will allow local officers to increase their presence in the communities they serve more strategically.

However, both the concepts of proactive policing and community visibility, as well as their importance, are not homogeneous across Alberta, but rather differ across municipal size and type. For example, in urban municipalities, community visibility may look like police consistently appearing at and participating in community events to build relationships with residents. In isolated rural areas of the province, visibility may be as simple as having a police officer physically visit a resident who was the victim of a property crime, rather than only follow up over the phone. In other words, the threshold for what constitutes an effective level of community visibility differs significantly across the province, meaning that a single definition or measure of community visibility is unlikely to exist.

Similarly, the importance of proactive policing varies across the province. In urban communities that are typically located near a detachment and have short response times, proactive policing is more of a

priority, likely because it is seen as the “next step” in enhancing community safety beyond the core policing aspects of actually responding to calls for service. Conversely, rural municipalities rank response time as having much higher importance than community visibility, likely because current response times in rural areas are much longer than urban communities.

The survey reflects some of the differences in how urban and rural municipalities view proactive policing. The question below shows the relative importance that representatives of different municipal types assigned to travel time and time available for proactive policing in terms of how much importance each should have determining RCMP resourcing allocations (note that a higher number indicates a higher level of importance).

Municipal Type	Travel time importance	Proactive policing importance
City	1.71	4.29
Town	3.89	3.45
Village	4.80	3.75
Summer village	5.12	4.35
Rural municipality	4.97	2.89

What these results suggest is that larger urban municipalities that are likely to host a detachment are less concerned about travel time (which is likely already adequate), while villages, summer villages and rural municipalities, which are less likely to be near detachments, view travel time as a major concern. Interestingly, while all four urban municipal types shown above view proactive policing as relatively important, it is much less so in rural municipalities. This should not be viewed as an assumption that rural municipalities are not interested in having enhanced proactive policing in their area, but rather that response times (or reactive policing) is such a major concern in rural areas that rural expectations for anything beyond basic response is currently quite low.

These results also suggest that the RCMP must more effectively report on their rural proactive policing efforts, in the form of Crime Reduction Units, Call Back Units, and other initiatives, and their link to seeking to improve both police availability and community visibility in rural communities. It is likely that many rural residents (and municipalities) may be unaware of the proactive and strategic initiatives being undertaken by the RCMP with the end goal of increasing police presence and response in rural areas.

RECOMMENDATIONS:

- Collaborate with the Alberta Police Advisory Board to develop meaningful definitions and measures of proactive policing and community visibility that are relevant in both urban and rural municipalities.
- Determine how the continued growth of specialized units will directly support improved frontline policing (including proactive policing and community visibility) in rural and small urban municipalities.
- Collaborate with the Alberta Police Advisory Board to develop messaging on how to better communicate the proactive policing initiatives already underway to support improved rural police services.

Outcome Accountability

Priority 6: Provide the Alberta Police Advisory Board with adequate and consistent financial and administrative support.

The Alberta Police Advisory Board fills an important gap in the current RCMP-Alberta Justice and Solicitor General planning and priority setting process by ensuring that small and rural communities have some level of representation in the process. The current interim Board is supported by RMA and AUMA, along with additional assistance from Alberta Justice and Solicitor General and RCMP staff. Moving forward, RMA and AUMA expect to have a lesser role in the Board, as board members will no longer exclusively be RMA and AUMA representatives, but rather broader municipal and community representatives from rural and small urban municipalities.

To ensure that the Board functions effectively in the long-term, a portion of the funds currently collected through the new police costing model should be used to support the expenses and administrative requirements of the board. This includes board member costs and per diems and board administrative and capacity requirements, such as minute-taking, report writing, survey construction and analysis, and other specialized skills that the board will require but that cannot continue to be provided on RMA and AUMA on a no-cost basis. Proactively confirming that the operational Board will be adequately supported is crucial to supporting member recruitment, long-term planning, and ensuring the board can focus on policing, rather than on how to remain operational with limited provincial support.

RECOMMENDATIONS:

- That Alberta Justice and Solicitor General allocate a portion of revenues collected annually through the police costing model to provide required administrative funding for the Alberta Police Advisory Board before transferring funding to the RCMP.
- Collaborate with the Interim Board to determine long-term board costs and administrative requirements in order to inform the funding allocation.

Priority 7: Work with the Alberta Police Advisory Board to develop best practices to enhance the quality and consistency of communication and collaboration between detachments and the municipalities that they serve.

The RCMP has been a consistent and helpful partner for the Alberta Police Interim Advisory Board since its establishment in early 2020. The interim Board will be in place until the end of November 2021. Moving forward, the operational Board will likely consist of a variety of municipal and community representatives from rural and small urban municipalities across Alberta. In addition to providing input and recommendations to the RCMP and provincial government on behalf of municipalities, it is expected that the Board will play an important role in enhancing local engagement and partnership between the RCMP and municipalities across the province.

As explained under Priority 4, the effectiveness of local detachment-municipal engagement and collaboration varies by municipal size and type. A core focus of the work undertaken by the RCMP and Board should be to improve the consistency of local communication and collaboration, particularly in small municipalities, through the creation and implementation of best practices and policies that can be

used by both detachments and municipalities to encourage engagement in cases where a lack of time and resources may prevent the use of more “official” approaches such as police committees.

Such approaches should be flexible to meet the differing needs and capacities of municipalities, and should be grounded in the idea that an ongoing relationship should exist between each detachment and all of the municipalities it serves, but that this relationship should not necessarily look the same across the province.

RECOMMENDATIONS:

- Collaborate with the Alberta Police Advisory Board (possibly through the formation of a sub-committee involving RCMP, Government of Alberta, and Board members) to develop communication and collaboration best practices and approaches in the following areas:
 - How to form relationships with municipal leaders
 - How to effectively report to and update municipalities about policing in the community
 - How to work with municipalities to identify and engage community leaders, including those from racialized and/or under-represented communities
 - How to maintain collaboration following changes in detachment and/or municipal leadership

Social Justice

Priority 8: Work with community and municipal leaders to address racism and other forms of discrimination in policing

Alberta’s communities are diverse, and many Albertans have had negative experiences with police that have shaped their perceptions of policing and the role of police in their communities. Incidents across Canada and the United States over the past year have brought into sharp focus the concerning relationship between police and racialized groups that has existed for decades. It is critical that the RCMP engage with racialized and Indigenous communities, and other marginalized groups across the province to understand their perspectives on systemic discrimination in policing, and to ensure that all Albertans are effectively served by police.

While the Alberta Justice and Solicitor General/RCMP 2018-2021 Joint Business Plan includes a priority related to better serving Indigenous communities, a similar priority is required for other marginalized groups. Additionally, although the business plan includes a strategy to develop cultural awareness, diversity and inclusion training for all employees, action must go beyond simply requiring employees to take a single diversity training course. This focus should extend to the detachment level and require each detachment to take concrete, measurable steps to learn about and engage with racialized and vulnerable groups within the communities they serve. The Alberta Police Advisory Board can play a role in supporting this relationship-building by working with municipalities to identify those in small and rural communities that are members of or represent racialized or vulnerable populations.

RECOMMENDATIONS:

- Develop measurable detachment-level requirements for engaging with local racialized and/or under-represented communities.
- Collaborate with municipalities and other leading community organizations to raise awareness of and respond to local social justice issues.

- Collaborate with the Alberta Police Advisory Board to develop initiatives that will support detachments in undertaking this action.

Next Steps and Implementation

As the role of the Alberta Police Advisory Board is to provide recommendations to the RCMP and Alberta Justice and Solicitor General, it is ultimately the responsibility of the provincial government and “K” Division leadership to decide whether to accept the Board’s recommendations, and if so, how to integrate them into existing planning processes and strategic initiatives.

Many of the recommendations above build on actions already reflected in planning documents, and mainly focus on the need to accelerate implementation or collaborate with the Alberta Police Advisory Board to a greater extent around certain existing initiatives.

The Board would appreciate an opportunity to meet with the leadership of the RCMP and Alberta Justice and Solicitor General to discuss the priorities identified in this report, and how all three groups can work together towards effective implementation.

Appendix 1

ALBERTA POLICE INTERIM ADVISORY BOARD

TERMS OF REFERENCE

BACKGROUND

The Minister heard that Albertans wanted more of a voice into the setting of provincial policing priorities. The Minister of Justice and Solicitor General (Minister) is establishing the Alberta Police Advisory Board (Board) in support of the provincial government and Minister's mandate and responsibilities respecting the provision of adequate and effective policing in Alberta and in support of the participation and input of Albertans.

The Board will be implemented in two phases:

1. Within the first year, an Interim Board will develop the structure and scope of the Advisory Board (Phase One).
2. On completion of the Interim Board's mandate, the work of the Advisory Board will then commence for a four-year term (Phase Two).

MANDATE / RESPONSIBILITIES

On behalf of all provincial police service (PPS) municipalities and Albertans, the Interim Board will collaborate with the Ministry of Justice and Solicitor General (JSG) and those PPS municipalities to:

- develop the scope and terms of reference for the operational Board;
- develop a recruitment and selection process for operational Board members;
- develop governance documents for the operational Board, including at minimum, a Competency Matrix for Board member appointments and review, a Code of Conduct, and a Mandate and Roles Document;
- provide input, advice and recommendations to the government and Royal Canadian Mounted Police (RCMP) "K" Division on the buildup of the provincial police service related to funds raised by the Police Funding Model; and
- provide input into discussions respecting the provincial policing priorities for the 2021/22 fiscal year to facilitate engagement during transition to the operational Board.

SCOPE

While the Interim Board will provide input to the buildup of the PPS and to the development of provincial policing priorities during Phase One, the interim Board will be primarily development-focussed to ensure the efficient and effective, structure, participation and contribution of an Advisory Board.

In relation to the development of provincial policing priorities during Phase One of the Board, the Interim Board will conduct the necessary consultation, research, and analysis of current and anticipated policing issues as well as the priorities of significance and importance to Albertans and Alberta municipalities to support their role. Priorities and issues identified by the Board might include, but are not limited to:

- Community Safety and Well-being;
- Crime Reduction and Prevention; and
- Cross Jurisdictional Crime.

The Interim Board may also make recommendations and provide advice to the Minister with respect to the JSG/RCMP joint business plan, annual performance plans and multi-year financial plan as appropriate during the interim year, and ensuring the input is reflective of all PPS municipalities.

MEMBERSHIP

The Interim Board is comprised of:

- Four representatives from the Executive or Board of the Rural Municipalities of Alberta (RMA);
- Four representative from the Executive or Board of the Alberta Urban Municipality Association members (AUMA); and
- One representative from the Executive of the Alberta Association of Police Governance (AAPG).

Non-voting members of the Interim Board include:

- Executive Director, Law Enforcement and Oversight Branch, JSG
- Director, Contract Policing and Policing Oversight, JSG
- Manager, Policing Oversight and Contract Policing, JSG
- One administrative representative from RMA
- One administrative representative from AUMA

Interim Board Representation

Interim Board voting members have been selected to ensure broad representation, perspectives and diversity from all PPS municipalities and, where possible, representation aligns with each of the four RCMP districts (i.e. Central Alberta District, Eastern Alberta District, Southern Alberta District, and Western Alberta District).

Voting members of the Interim Board represent the broadest possible municipal and public interests across the PPS municipalities. A preference has been given to those who are engaged in or knowledgeable in matters related to policing. Voting members are not currently employed in law enforcement and policing. The organizations have determined voting members of the Interim Board having regard to any personal, professional or business interests or relationships that could reasonably be considered to represent an actual or perceived conflict of interest in relation to Interim Board work.

Any concerns respecting the selection and representation of an Interim Board member or of an Interim Board member's failure to conduct member duties and responsibilities in a manner consistent with this Terms of Reference will be addressed in a timely manner as appropriate, up to and including, the replacement of the Interim Board member.

It is important that all Interim Board voting members attend the meetings to ensure continuity and to maximize the efficiency and productivity of the Interim Board.

Non-voting members of the Interim Board will be in attendance at Interim Board meetings in an advisory, observational, and support capacity to the work of the Interim Board and to share information.

Chair

An Interim Board Chair (Chair) will be elected by the Interim Board using voting procedures of this Terms of Reference. The Chair is responsible for the overall leadership of the Interim Board, management of Interim Board meetings, sharing of information, and communication of Interim Board matters with the JSG. The Chair will collaborate and consult with Interim Board members to establish Agendas, Work Plans, Records of Discussions and other materials, as required.

The Interim Board will also elect an Alternate Chair from the Interim Board to act as Chair if the Chair is unable to attend Interim Board meetings.

Secretary

An Interim Board Secretary will be elected by the Interim Board using voting procedures of this Terms of Reference. The Secretary will ensure that a record of meeting agendas, meeting attendees, and any recommendations made by the Interim Board are kept. Copies of these records will be provided to JSG, and the respective organization's Chairs, Presidents and Executive Directors.

RESPONSIBILITIES

Conduct

The members of the Interim Board must, at all times, observe the highest standards of integrity and objectivity in their duties. Interim Board members must declare any direct or indirect personal, professional or business interests or relationships which could reasonably be considered to represent an actual or perceived conflict of interest in relation to Interim Board work. If a conflict of interest declaration is made by a member, the Interim Board must decide, having regard to the nature of the relationship, if the member must withdraw from membership on the Board.

Duties

Members of the Interim Board are required to consult and liaise with the PPS municipalities (councils and local policing committees/advisory committees) in order to bring those perspectives to discussions by the Interim Board and to determine the most efficient and effective Advisory Board structure. Engagement and work conducted as an Interim Board will be conducted in a transparent manner with the organizations and JSG to enable accountability of the Interim Board.

The Interim Board will engage with the Minister, JSG, and the Commanding Officer of RCMP “K” Division as necessary and required to discuss matters related to the Interim Board’s mandate, ongoing policing issues and concerns, to receive updates on the progress of policing initiatives, and to provide updates on the Interim Board’s work.

Meetings

Meetings are expected to be held monthly, at minimum, either through face-to-face meetings or teleconference to ensure the Interim Board is prepared to transition to the Advisory Board by April 1, 2021.

Meeting agendas will be distributed at least one week in advance of each meeting by the Chair. Copies will be maintained as records.

Reporting

Municipalities

Within the context of the Terms of Reference Confidentiality provisions, the Interim Board:

- will report to their respective organizational members following any Interim Board decisions; and
- will keep their organizational members and municipalities (councils and local policing committees/advisory committees) apprised of government policing priorities and initiatives respecting policing priorities and Interim Board mandate matters.

Minister and JSG

The Interim Board is accountable to the Minister and is required to report in writing to the Assistant Deputy Minister, Public Security Division, as follows:

1. To provide a final, Interim Board approved, Terms of Reference for the Advisory Board by January 1, 2021;
2. To provide a report detailing the Interim Board’s recommendations and advice on the buildup of PPS resources from Police Funding Model revenue by the end of Interim Board term;
3. To provide a report detailing the Interim Board’s recommendations and advice on the JSG/RCMP “K” Division Multi-year Financial Plan by January 31, 2021; and
4. To provide a report detailing the Interim Board’s recommendations and advice on provincial policing priorities by January 31, 2021.
5. To provide any other report or document as determined necessary and appropriate by the Minister, JSG, or in consultation with the Minister and JSG.

A record of meeting agendas, meeting attendees, and of any recommendations made by the Interim Board will be provided to JSG, and the respective organization’s Chairs, Presidents and Executive Directors.

Quorum

Quorum is required to conduct a meeting and for any Interim Board business. Quorum must include the Chair or Alternate Chair. Quorum is set at a minimum of 60 per cent of Interim Board members.

Interim Board business does not include the operational work necessary for Interim Board members to consult with their respective organizations or municipalities.

Voting

Elections and votes taken respecting any Interim Board business requires a majority vote by those Interim Board members in attendance to pass.

EXPENSES

Expenses necessarily incurred in the performance of duties as a member of the Interim Board will be reimbursed in accordance with the rates set out in the Travel, Meal and Hospitality Expenses Directive (Treasury Board Directive 1/2015) as amended from time to time, or any directive made in substitution, as if they were employees of the Government of Alberta.

CONFIDENTIALITY

The members of the Interim Board must maintain as confidential any information brought before them in the conduct of their work. Any information and knowledge learned, acquired or shared with by the Interim Board from the Minister, JSG, the RCMP "K" Division, or the RCMP generally, as a result of membership on the Interim Board or in relation to Interim Board work and its mandate will not be further communicated, disseminated or shared beyond the Interim Board without express permission from the originator of the information.

Any information and knowledge shared by the Interim Board to its respective organization's Chairs, Presidents and Executive Directors will be governed by the same confidentiality provisions as noted the interim Board and its members.

Members of the Interim Board must sign a confidentiality agreement as a condition of their appointment and participation on the Interim Board.

RMA, AUMA, and AAPG Chairs, Presidents and Executive Directors must also sign a confidentiality agreement in respect of any information and knowledge learned or acquired from the Interim Board and Interim Board members.

Appendix 2 – Alberta Police Interim Advisory Board Membership

Tanya Thorn	Board Chair	Councillor, Town of Okotoks
Kara Westerlund	Alternate Chair	Councillor, Brazeau County
Tom Burton	Board Member	Councillor, Municipal District of Greenview
Terry Coleman	Board Member	Board Chair, Alberta Association of Police Governance
Angela Duncan	Board Member	Deputy Mayor, Village of Alberta Beach
Tyler Gandam	Board Member	Mayor, City of Wetaskiwin
Trina Jones	Board Member	Councillor, Town of Legal
Kathy Rooyakkers	Board Member	Councillor, County of Wetaskiwin
Jason Schneider	Board Member	Reeve, Vulcan County

Appendix 3 – Alberta Police Interim Advisory Board Survey

1. Name of Municipality
2. Our municipality is a:
 - City
 - Town
 - Village
 - Summer Village
 - Specialized Municipality
 - County/Municipal District
 - Other (please specify)
3. We represent a population:
 - Under 2,000
 - 2,000 - 5,000
 - 5,001 - 10,000
 - Over 10,000
4. Our municipality receives RCMP services from the following detachment(s): (fill in)
5. Please provide a contact name, in case there is a need to follow up with your municipality to clarify feedback or get more detailed information regarding interesting ideas or collaborations (optional).

Engagement with RCMP

6. Does your municipality have a police oversight body?
 - Yes
 - No
7. How often does your municipality or municipal/community police oversight body meet with your RCMP detachment commander(s)?
 - Four times a year or more
 - 2-3 times a year
 - Once a year
 - Less than once a year
 - We've never met formally
8. Do you consider your current meeting frequency with the RCMP detachment commander(s) to be sufficient?
 - Yes
 - No
9. Does your RCMP detachment(s) provide you with a copy of their annual performance plan(s)?

Yes

No

10. Is your municipality or municipal police oversight body involved in developing the detachment's annual performance plan (APP)?

Yes

No

11. Does your municipality or municipal police oversight body receive regular reporting (such as information on statistics, trends, and detailed crime rates) from your local detachment(s)?

Yes

No

If yes, what type of information *do you* receive?

Is there any other type of information you would like to receive that is not currently provided?

If no, what type of information *would you like* to receive?

12. Please share any examples of effective collaboration between your detachment(s) and your municipality/community members.

13. How could your detachment(s) improve engagement with your municipality/community members?

14. Do you think that processes for providing input on local policing priorities should be formalized and standardized? For example, independent municipal, community police oversight bodies, which are currently optional, could be mandated in legislation.

Yes

No

If yes, what is your preferred mechanism for doing so?

Policing Priorities

15. Rank the policing priorities below in the order of importance for your municipality in 2021/22.

Traffic enforcement (i.e. aggressive driving, distracted driving)

Family violence (i.e. domestic abuse and threats)

Illegal drug-related offenses (i.e. possession, trafficking)

Impaired driving (drugs, alcohol)

Crimes against persons (i.e. assaults, threats)

Minor property crime (i.e. vandalism, theft from motor vehicles, theft under \$5,000)

Major property crime (i.e. break and enters, theft of motor vehicles, theft over \$5,000)

Proactive/community policing (i.e. school resource officers, patrols)

Increased focus on prolific offenders

Other (fill in)

16. Rank the RCMP service issues below in the order of importance for your local RCMP detachment to resolve in 2021/22.

911 response times
Community visibility
Filling vacancies and providing full coverage service
Engaging with the municipality (reporting, setting priorities, communication on service changes, etc.)
Communication with community members and other stakeholders
Other (fill in)

Rollout of New Police Resources

The RCMP currently determines how to allocate additional and/or new policing resources by analyzing each detachment's workload. This analysis takes the following factors into account:

- Travel time
- Call volume
- Type of crimes occurring in the area
- Amount of time required for investigations
- Size of detachment
- Time available for proactive policing (patrols, community engagement, visiting schools, and attending community events).

17. Rank the order of importance of these factors to your municipality.

18. Are there any other factors that should be considered?

Revenue collected through the new costing model will be reinvested into policing, leading to an increase in the number of RCMP officers and civilian positions throughout the province. This investment prioritizes adding uniformed patrol officers in rural RCMP detachments, but will also add police officers to centralized RCMP units that work to address province-wide issues such as organized crime, drug trafficking, and auto and scrap metal theft. A portion of the revenue will also be used to fund new civilian positions to assist with administrative tasks and provide investigative support. These administrative roles are intended to improve response times and help ensure officers have the support they need to protect Albertans by spending more time in their communities.

19. Do you agree that RCMP resource allocation should balance frontline officers with centralized, specialized, and/or civilian positions? (Strongly agree to strongly disagree)

Police Costing Model

20. Have you engaged in conversations with your local detachment around whether any new police resources arising from the new costing model may affect policing in your municipality?

Yes

No

If yes, what information did you receive from your detachment on new police resources?

21. Has the information provided by the Government of Alberta on the new police costing model been sufficient to ensure your council and staff understand the new model, including how costs are determined and how the additional funding could be used?

Yes

No

If no, what additional information do you require on the new police costing model?



309B Macleod Trail SW
High River, Alberta Canada T1V 1Z5
P: 403.652.2110 F: 403.652.2396
www.highriver.ca

February 3, 2021

OFFICE OF THE MAYOR

VIA E-MAIL: cao@nampa.ca

Office of the Mayor,
Village of Nampa
PO Box 69
Nampa, AB T0H 2R0

Attention: Mayor Clynton Butz

RE: Reinstatement of the 1976 Coal Development Policy

Dear His Worship:

In June of 2020, the Government of Alberta rescinded the Coal Development Policy (Coal Policy) without adequate consultation with First Nations, environmental groups, residents, property owners and local governments. This policy was originally developed with the intended purpose to guide coal extraction along the eastern slopes of the Rockies based upon a land use classification system and dictated where and how coal leasing, exploration and development could occur.

The Coal Policy introduced in 1976, guided coal extraction in one of the most important landscapes in Alberta and Canada. The Eastern Slopes provides water to users from the Rockies to the Hudson Bay. For 44 years, the policy provided essential protection of valuable water resources, ensuring downstream communities had access to clean drinking water, that farmers had access to irrigation water to protect their livelihoods and that ecosystems that tourists come to experience remained in their pristine state.

The rescindment of any policy that affects public lands and/or water resources, requires public consultation with First Nations, environmental groups, residents of Alberta, property owners and local municipalities. Without that consultation, our democratic processes are undermined.

In response to the Government of Alberta's action, the Town of High River's Council adopted the following resolution at its Regular Meeting of Council on January 11, 2021:

BE IT RESOLVED THAT Council direct Administration to draft a letter to Premier Jason Kenney, requesting the immediate reinstatement of the 1976 Alberta Coal Policy which was rescinded on June 1, 2020;

AND THAT the letter requests that the Government of Alberta begin public consultation with Indigenous groups, environmental groups and all stakeholders in Alberta on any proposed revisions or replacement to this policy;

AND FURTHER THAT this letter be sent to the Minister of Environment & Parks Honorable Jason Nixon, Minister of Energy Honorable Sonya Savage as well as the MLA for Livingstone-Macleod Roger Reid.

This letter was sent to the Premier and Ministers on January 12, 2021 and a meeting has been requested with the Premier. To date, the Town of High River has neither received a response to our letter nor a meeting with the Premier.

Other local governments, public officials and Albertans have called upon the Government of Alberta to reinstate the Coal Policy. In response, the Government of Alberta has cancelled some of the coal leases but this is not adequate in order to protect water resources for downstream communities, such as High River.

Therefore, at the February 1, 2021 Special Meeting of Council, the following resolution was adopted:

WHEREAS Council adopted resolution #RC 14 -2021 requesting the Province of Alberta immediately re-instate the 1976 Coal Development Policy;

AND WHEREAS coal exploration and open pit mining will impact water resources for downstream communities affecting businesses, residents, ranchers, farmers and ecosystems;

AND WHEREAS coal exploration is causing irreparable damage to the landscapes and watersheds as well as adversely affecting the public's access, use and enjoyment of Crown lands on the Eastern Slopes of Alberta;

AND WHEREAS local First Nations groups, municipalities, landowners and ranchers are legally challenging the Province's rescindment of the 1976 Coal Policy in the Courts;

BE IT RESOLVED THAT Council request all coal exploration be immediately ceased on the Eastern Slopes of Alberta and cease issuance of any new exploration permits on the Eastern Slopes of Alberta until public consultation has taken place regarding the future of coal mining on the Eastern Slopes of Alberta;

AND THAT Council request the Government of Alberta & Premier Jason Kenney issue an immediate stop work order for all existing coal exploration permits on the Eastern Slopes of Alberta and cease issuance of any new exploration permits on the Eastern Slopes of Alberta until public consultation has taken place regarding the future of coal mining on the Eastern Slopes of Alberta;


AND THAT Council direct Administration to investigate legal options relating to the damage caused due to exploration on Alberta's Eastern Slopes.

AND FURTHER THAT Council direct Administration to prepare a letter with a copy of this resolution to all members of the Federation of Canadian Municipalities, Alberta Urban Municipalities Association, Rural Municipalities of Alberta, Municipalities of Saskatchewan, Saskatchewan Association of Rural Municipalities and Association of Manitoba Municipalities requesting their support to re-instate the 1976 Coal Development Policy.

In light of this resolution, the Town of High River is respectfully requesting that you consider drafting a letter of support to the Government of Alberta for the immediate Exploration Stop Work Order as well as the reinstatement of the Coal Policy.

Thank you for considering our request,

Sincerely,

A handwritten signature in black ink, appearing to read "Craig Snodgrass", enclosed within a large, loopy oval shape.

Craig Snodgrass
Mayor

CS/cp/kr



Flood Mitigation Trailer

Marcel Maure

Director of Protective Service/Fire Chief

MD of Smoky River



Overland Flooding

- Overland flooding occurs almost every year in some part of the Northwest Zone
- Mitigation of these waters is essential to protect property and infrastructure
- There are trailers available which contain the tools necessary
- These trailers are located in the South part of the province, an approximate 16hr round trip drive to get a trailer to the North
- A request was submitted to have a trailer in the Northwest part of the province
- The response to date has been NO



- Overland flooding occurred throughout the North of the province in 2020
- The trailer was used to protect infrastructure from overland flooding in Peace River, MD of Smoky River, Big Lakes County and the Town of Sexsmith
- A combined 11 homes, 1 Condo complex and the Telus building were all saved

Options

- I am here today presenting a few options that may help:
- Elected leaders push the Provincial leaders to station a trailer in the North
- Communities in the Northwest gather funds and create our own trailer.
- One agency purchases a trailer, and charges for its use



Option 1

- Have elected leaders pressure the Government of Alberta to acquire a trailer for the North, or transfer one of the 3 in the South to the North

Option 2

- Build a flood mitigation trailer for the North.
- Costs \$200,000 to purchase one from the factory
- Costs \$123,123 to equip an existing Smoky River fire rescue trailer



Option 3

- One agency purchases a trailer, makes it available to others on a cost per use basis

In order to prevent the loss of property we must be proactive.



Northern Alberta Elected Leaders

Al Kemmere

Presented by:



ALBERTA COUNSEL

About Alberta Counsel

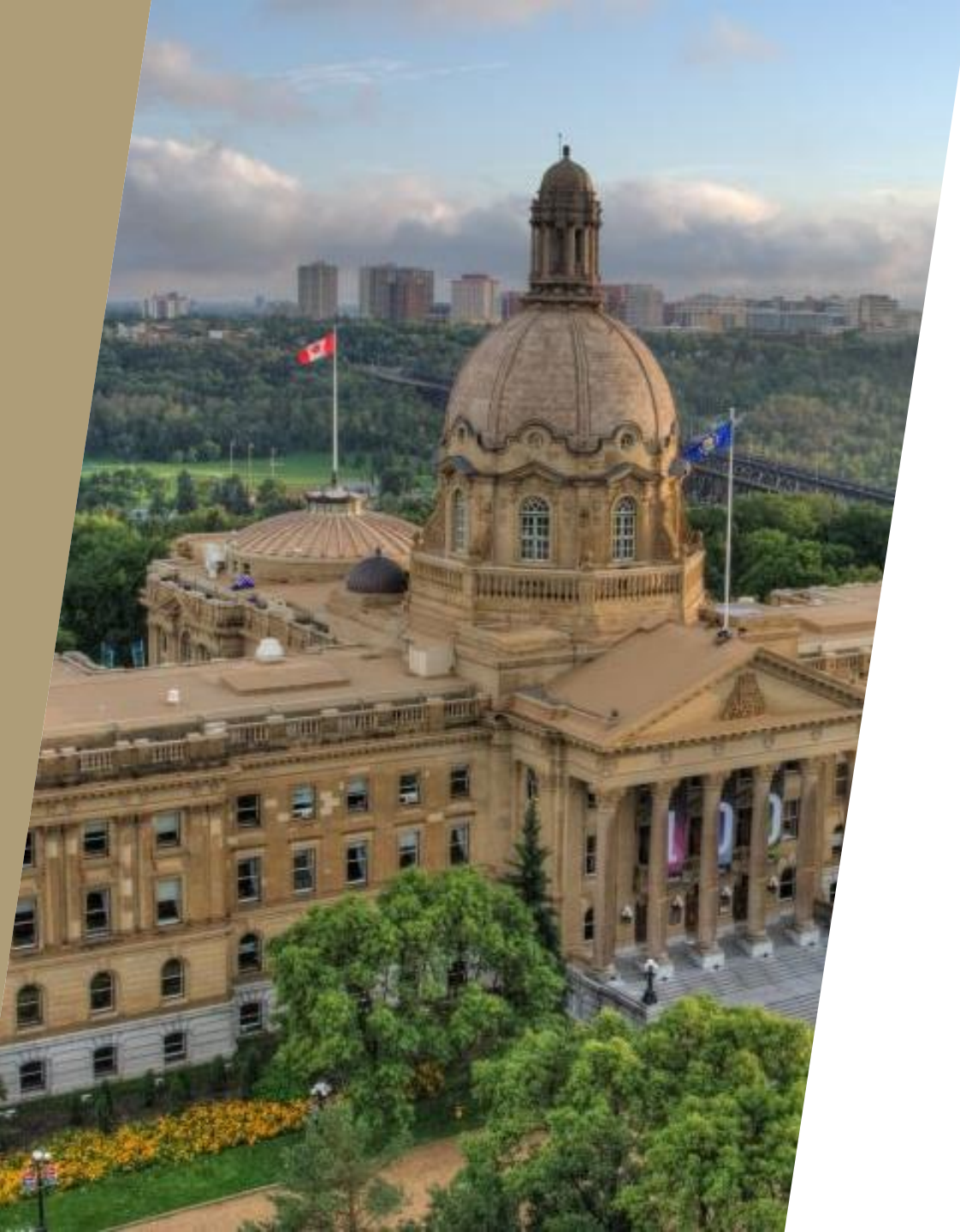
Legal and Lobby

- Founded in 2015
- Multi-partisan firm
- Largest and fastest growing government relations firm in Alberta
- Only firm that combines legal with lobby



Key Issues for Clients of Alberta Counsel

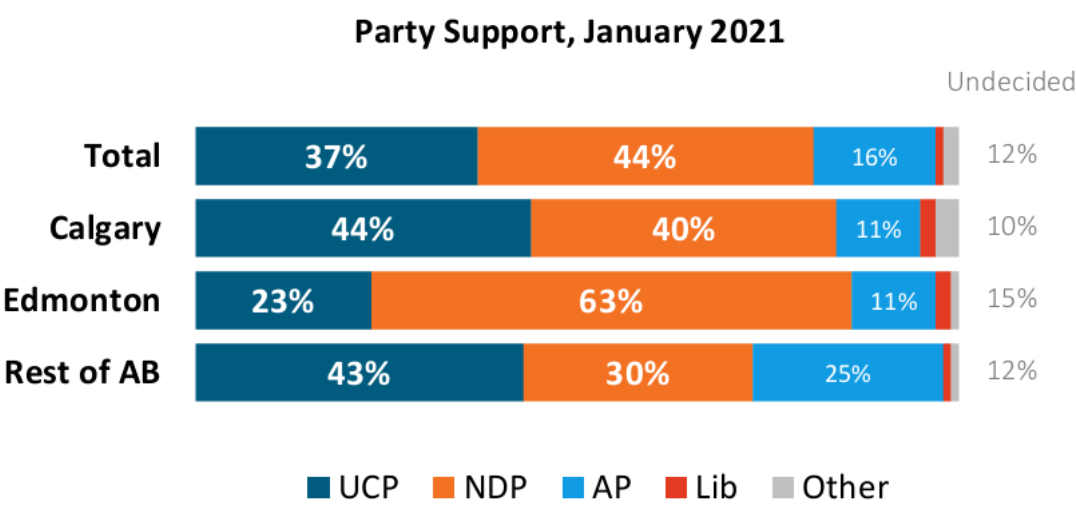
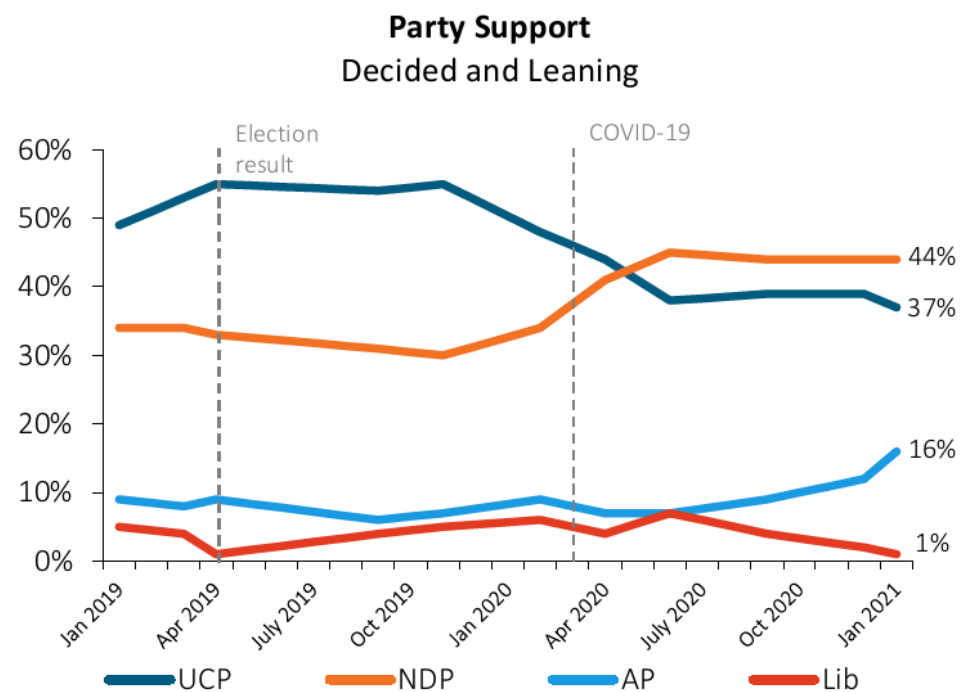
- ▶ ID349
- ▶ Transportation
- ▶ Infrastructure Projects
- ▶ Water and Wastewater Projects
- ▶ Healthcare
- ▶ Economic Development



Issues Facing Northern Alberta

- ▶ Healthcare
- ▶ Transportation
- ▶ New Rail
- ▶ Policing Costs
- ▶ Oil & Gas Development
- ▶ Cariboo
- ▶ Municipal Funding
- ▶ Unpaid Taxes

Current Political Environment



Proprietary information. Do not circulate



If you have any
follow up
questions, please
feel free to get in
touch with us.

Ledgeview
Building
800, 9707-100
Street

Al Kemmere

A.kemmere@albertacounsel.com

780-652-1311

NAEL meeting

Feb 5, 2021

Speaking notes Site C dam concerns

I will try keep this brief in the name of time and not give an in-depth review of this project. As you are likely aware, BC Hydro is currently constructing an earth fill hydroelectric dam, the 3rd dam on the Peace River, named Site C and located near Ft St John, British Columbia. It has recently come to the attention of the County of Northern Lights council that there have been considerable concerns raised regarding the stability of the Site C dam. I will try give a very non-technical summary of these concerns, I'm no engineer or construction expert.

Almost from the start, Site C has faced setbacks, virtually all of which involved the notoriously unstable terrain on which the dam is being constructed. I would like to note that the location chosen is a very short distance upstream from Taylor, British Columbia where a suspension bridge crossing the Peace River collapsed in the 1950s in part due to soil movement at a pier site. The current location was known to be poor in the 1980s when the project was originally dropped. Then it was resurrected and the same location was again chosen even though the BC Utilities Commission had indicated in the 80s that BC did not need the electricity and the Site C dam would have "negative social and environmental impacts". Geotechnical risks were a key reason BC Hydro's board of directors rejected the project in the early 1990s. But despite all the warning flags and geotechnical reports, construction began in 2015 and continues today as we speak, with massive cost overruns. Originally budgeted at \$6.6 billion when the project was first announced in 2010, costs at the end of July 2020 are now projected at \$10.7 billion and now further reports now say the cost could realistically grow to more than \$12 billion. This is the single most expensive publicly funded infrastructure project in the history of British Columbia, and much of the cost overruns are attributed to the geotechnical challenges the project has encountered. On October 21/20, it was reported that 2 top BC civil servants, including the senior bureaucrat who prepares Site C dam documents for cabinet, knew in May 2019

that the project faced serious geotechnical problems due to its “weak foundation” and the stability of the dam was “a significant risk”. There has now been a major engineering change in the dam configuration from the traditional ‘C’ formation to an ‘L’ formation in an effort to avoid some of the poor shale based soil conditions.

So why is this a concern for us on this side of the border? Northern municipalities in the province of Alberta, especially those along the Peace River valley, will surely be the ones to suffer should the structure fail, and in fact the effects on our residents and the economy could be catastrophic, and yet little information has been shared by our provincial government regarding the serious safety concerns. The Site C project is in a massive deficit at this time combined with serious safety questions and yet we have no indication that British Columbia has shared any of this information with Alberta. We are not looking for NAEL to take any action other than bring awareness to the issues and perhaps as northern municipalities with the most to lose, we can get some answers or assurance from our provincial government on their actions with respect to this project. Maybe there has already been dialogue between the 2 provincial governments but if so, this information has not reached the municipal level.

Some of you here today will be attending the RMA District 4 zone meeting next week and there will be a presentation then on Site C’s geotechnical concerns.

Reeve Terry Ungarian

County of Northern Lights