**Proposal: A Covid-19 Call Center for the State of Montana**

**Synopsis**

**I propose a call center to fight the spread of Covid-19 in Montana**, manned (and womanned) by hundreds of volunteers and perhaps paid workers. The primary purpose of the call center will be to perform **immediate** **contact tracing** in order to contain or mitigate the spread of Covid-19. A second objective, if deemed feasible and effective, would be proactively to identify contact persons\* with telltale precursor symptoms. For the call center to work effectively in Montana, coordination and sharing of knowledge between individual county authorities will be of crucial importance in contrast to other states where the population is not so mobile (see “**Example Cases**” below). To support the call center, I also propose a set of initiatives to publicize and de-stigmatize knowledge around the spread of Covid-19 in Montana.\*\*

**The problem to be solved**

Covid-19 is highly contagious, with an R0 estimate (in the UK) at approx. 2.6. Studies in S. Korea, Japan, and Vò, Italy[[1]](#footnote-1) suggest that asymptomatic transmission accounts for a substantial portion ( approx. 30 %) of cases. Our published data lags always 13-20 days behind the numbers of actual current spread.

**Challenges**

* **Doctors and medical personnel are too busy to do the leg work necessary for contact tracing**. This work must include, for example, retrieval of phone numbers and names of all contacts working in commercial and public establishments visited by the infected person.
* **Montana has certain conditions—for example, a highly mobile population--unique to the state**, or perhaps unique to a group of Western states (**see Example Case 3 below**). Federal approaches and definitions are by necessity more generic or abstract.
* **Some citizens may continue to be skeptical of the seriousness of Covid-19 or of the efficacy of Federal measures to fight the disease**. This skepticism may arise from traditions of independent action and spirit in Montana, as well as from recent Federal vacillations and mixed messages about the extent of the threat posed.
* **Proactive attempts to identify precursor symptoms in contact persons could possibly incite undo panic and disinformation**. Proactive identification of precursor symptoms would have to be done with care. You and other medical experts will know how to proceed.

**A Proposed Solution**

A single, state-wide call-center will be established to perform immediate contact tracing against the spread of Covid-19, using established methods.[[2]](#footnote-2) Hundreds of volunteers and paid workers will be recruited. Call centers are currently being used by the state of Massachusetts,[[3]](#footnote-3) and have been proposed for use in the United Kingdom.[[4]](#footnote-4) In the absence of large-scale testing regimes, contact persons could also be asked about possible precursor symptoms, e.g. loss of smell (anosmia) or loss of taste (dysgeusia). The following **Example Cases** indicate the kinds of work to be performed by call center staff:

* **Example Case 1:** A man recently arrived back home from a trip to Washington State attends a business meeting in downtown Billings. He infects 2 people.
* **Example Case 2:** A businesswoman travels from Billings to Helena. After her sales meeting, she goes to a bar, and infects 1 person.
* **Example Case 3:** A friend from Bozeman makes rendezvous with a friend in Billings in Livingston to go on a fishing trip near Livingston. They stop at a local gas station, a tackle shop, and afterwards at a restaurant. The man from Bozeman gets into a conversation of some 5 solid minutes with the proprietor of the tackle shop at the counter (concerning the merits of certain waders and hand-warmers). He infects the proprietor, and a waitress at the restaurant.

While **Example Cases 1** and **2** will characterize many other states, **Example Case 3**, with its scenario of high patient mobility, is unique to Montana and to perhaps a small group of other states that offer remarkable opportunities for outdoor recreation. **Example Case 3** would not so frequently characterize, for example, Nebraska.[[5]](#footnote-5)

It is of crucial importance, therefore, that the work of the call center be coordinated and in close contact with all counties in Montana in order to locate the patient and all contact persons, whose locations, as in **Example Case 3**, may extend over several towns and hundreds of miles across the state.

**The Work of the Call Center**

Once identified by hospitals and health authorities, the patient would immediately be contacted and interviewed by call center volunteers. The patient’s memory of all contact persons and locations visited during the time they were contagious might be imperfect (“We stopped at that gas station, the one about a mile east of town”). The call center staff would do the work of eliciting as much information about contacts and locations as possible. The objective would be to secure contact details (phone, email) of (1) all locations; (2), ultimately, all contact persons at those locations with whom the patient had significant interchange.

Call center operatives would then contact all the patient’s locations and contact persons. They would offer recommendations for isolation/treatment as per the suggestions of medical authorities. Call center operatives would also ask contact persons, if deemed appropriate, questions about the onset of precursor symptoms, as a proactive measure.

**Computerized tools that could expedite the work of the call center**

**Tool for immediate use: Microsoft Excel. See attached spreadsheet example. Risk numbers could possibly be assigned, but the important thing is to collection persons, their contact details, dates of contact, and locations.**

**Possibility: Database for mapping Covid-19 propagation of disease in Montana:**

**Likely most appropriate database type:** **Graph Database** (although no expert in graph theory, the author believes that most graphs would likely be open (not closed/cyclic), and simple enough to map, persist and query).

**Candidate databases: Neo4J, OrientDB, GraphDB**

**Caveat: Don’t, however, dilly-dally around with tech solutions. They can be brought in if genuinely useful and when ready. Start collected data immediately, by hook or by crook, now: I suggest Excel**

**Supporting initiatives**

**Educate**

**The need to establish trust and authority.**

The above idea could be undersigned by something like the following statement:

**We, as concerned members of the Billings community, acting in our capacity as Leadership Council for the Billings Clinic, seek to implement community strategies for tackling the spread of Covid-19 in Montana.**

**Warn**

**Establish the threat of Covid-19 not through abstractions (“the exponential curve…”) but through concrete examples:**

It’s May 14. Why is your mother dying? Because you went fishing on the Bighorn with a couple of friends on April 8th. You had a drink at a good local place afterward, and your best buddy, sitting next to you, laughed when you told him a good joke about dumb out-of staters who try to catch trout in Montana with hoppers at dawn. You never felt any symptoms at all. A few days later, you helped your Mom move some boxes. She smokes a bit but otherwise is fine. At one point you moved close to help her lift a heavy box of silverware and plates.

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\*In the foregoing text (“contact persons” = contacts)

\*\*A previous idea: A CV-Killer Phone-a-thon. I still have a draft of this idea were there interest, but I felt this idea had gone out of date.

**Time has rapidly moved on, but all is by no means lost**

SUCCESS!

Stay Safe,

Benjamin Weaver

3 Leckford Road, Oxford (MT address, 2826 Oakland Dr., No. 6, Billings, 59102)

Best contact: [Benjamin\_weaver@hotmail.com](mailto:Benjamin_weaver@hotmail.com)

+44 7876 040 752

1. On the important pilot study in Vò, Italy, see <https://www.bmj.com/content/368/bmj.m1165> [↑](#footnote-ref-1)
2. For a description, including decision trees, see <https://publichealthmatters.blog.gov.uk/2020/02/13/expert-interview-what-is-contact-tracing/> [↑](#footnote-ref-2)
3. <https://www.bostonherald.com/2020/04/03/charlie-baker-announces-robust-coronavirus-contact-tracing-program-in-massachusetts/> [↑](#footnote-ref-3)
4. https://www.theguardian.com/world/2020/apr/04/recruit-volunteer-army-to-trace-coronavirus-contacts-now-urge-top-scientists [↑](#footnote-ref-4)
5. Where I (BHW) grew up. [↑](#footnote-ref-5)