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Interim report 2 of recruitment and preliminary results related to the SwissCovid app from the Zurich SARS-CoV-2 Cohort study (ZSAC)

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0. Introduction

The SwissCovid digital proximity tracing (DPT) app was released on 25 June 2020. In fulfillment of the mandate provided to Prof. Viktor von Wyl by the Federal Office of Public Health, this brief report aims to summarize existing research on SwissCovid. The report is structured in four sections. Section 1 places official SwissCovid statistics into an international perspective by comparing key performance indicators across different countries. Section 2 provides a summary of existing research findings on SwissCovid. Section 3 provides an overview over recruitment efforts and new data collections of the Zurich SARS-CoV-2 cohort study, which are partially funded by the FOPH mandate. Finally, in section 4 the report provides a brief outlook on further research needs and planned data analyses.

1. Download and utilization of SwissCovid: an international perspective

As of 01.02.2021, SwissCovid has around 1.9 Mio. active users and 2.9 Million downloads (34% of the population if single downloads per person are assumed)., 67'000 CovidCode uploads and 51'000 telephone calls to the infoline have been registered (https://www.experimental.bfs.admin.ch/expstat/de/home/innovative-methoden/swisscovid-app-monitoring.html). By comparison, the German app has shared 228'000 positive test results, and 602'000 calls were registered, in a population that is almost 10 times larger than Switzerland (83 Million, 25.3 Million app downloads, 30.5% of the population) https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/WarnApp/Archiv_Kennzahlen/Kennzahlen_29012021.pdf?__blob=publicationFile . On the other hand, in the Netherlands, there has 4.5 Million app downloads corresponding to 25,8 % of the total population (17.3 Million) and 103'000 warnings have been issued. https://www.coronamelder.nl/media/Factsheet_Corona_latest.pdf

When analyzing positive-test upload authorizations on a per capita basis, Switzerland has the highest number (7.8 warnings per 100'000 inhabitants), followed by Germany (7.5 warnings per 100'000 inhabitants) and the Netherlands (6.0 warnings per 100'000 inhabitants). However, the Netherlands had launched their app only in October 2020.

https://en.wikipedia.org/wiki/COVID-19_apps#List_of_countries_with_official_contact_tracing_apps

These limited international comparisons demonstrate that SwissCovid has reached adoption that is comparable to those of other countries.

2. The state of research about SwissCovid: what do we know after 7 months.

Because Switzerland had a comparatively early start in releasing its digital proximity tracing app, it has been relatively well researched. This is largely thanks to early and sustained collaborations with other ongoing, nationwide research project on the SARS-CoV-2 pandemic, such as the Covid-19 Social Monitor (https://csm.netlify.app/) and Corona Immunitas (www.corona-immunitas.ch, which includes the Zurich SARS-

CoV-2 Cohort ZSAC). These collaborations have led to important insights on the use and impact of SwissCovid on the population level.

Early on, a consortium of Swiss researchers developed a research agenda for a comprehensive evaluation of digital proximity tracing apps including SwissCovid (https://smw.ch/article/doi/smw.2020.20324). The proposed research program centered around the three postulated main advantages of digital proximity tracing (DPT) apps over manual contact tracing (MCT): 1) DPT should be able to warn exposed contacts faster than MCT, 2) DPT should be able to reach exposed contacts who are not personally know to the infected index case, and 3) because notifications of exposed contacts are more automatized, DPT should still be able to function if MCT reaches capacity limits.

Regarding aim 1), the demonstration of faster notification, ZSAC has recently published an analysis as a preprint (https://www.medrxiv.org/content/10.1101/2020.12.21.20248619v1, extensively described in our report to the FOPH in November 2020) that demonstrates that app-notified contacts with risk exposure in non-household settings entered quarantine, on average, 1 day earlier than contacts who did not receive an app notification. The exact reasons for this time difference are still being investigated, but the data suggests that 1 in 5 persons of the group with app notifications received the notification before being reached by manual contact tracers. By contrast, notification of same-household exposed contacts was comparatively fast with and without app notification, and no time difference was noted. Overall, this analysis conducted in the well-documented setting of ZSAC provides evidence for one of the key promises of DPT.

One limitation of the ZSAC study is that it only recruited participants who were eventually also identified as contacts by MCT. This limits the ability of ZSAC to investigate also the second aim of DPT, i.e. to reach and notify more persons. An unpublished analysis using the Covid-19 Social Monitor provides further insights in this respect. The Social Monitor is conducted within an existing internet panel study (LINK-panel) and draws participants representatively with respect to age, gender and language region. The December survey, conducted from December 10 to December 22, includes information from 2’803 participants on SwissCovid use, SwissCovid notifications, having done any Corona-tests in past four weeks, positive Corona-tests in the past four weeks, and quarantine in the past four weeks. These different attributes can be visualized as a Venn-diagram of circles, which illustrates the (non-)overlap of different attributes and the magnitude of different sub-populations (Figure 1). The circles represent persons with a Corona-test (white), persons with a positive Corona test (yellow, as a subset of white), persons with an app notification (red), and persons who said they went into quarantine (blue). Numbers in square brackets illustrate the number of SwissCovid app users in a specific sub-population.

To address the question of exposed persons who were notified by SwissCovid, the red circle is informative (total N=74). It shows that 44 (segment E.2) of all 74 app notified persons (59.5%) neither obtained a Corona-test nor went into mandatory or voluntary quarantine. This means that, if the numbers are correct, 6 of 10 persons with an app notification may not have a contact point (quarantine, testing) with the health system. However, that does not mean that they did not react to the notification, as 28 of 44 (64%) contacted the infoline following the app notification. As a side note, the Venn diagram provides another interesting insight; 10 (13.5%) of 74 persons with an app warning tested positive for SARS-CoV-2. By comparison, the fraction of positive tested persons (n=33) among all those who reported to have been in quarantine (n=202) was around 16.3%. However, both fractions were higher than the overall fraction of persons with a positive SARS-CoV-2 results (n=71) in the whole study (n=2’803, 2.5%), suggesting a 5 to 6 times elevated exposure risk for persons with an app notification or staying in quarantine. Although these analyses are still very preliminary and should be interpreted with caution, they show an interesting way forward to gain further insights about the use and effectiveness of SwissCovid.

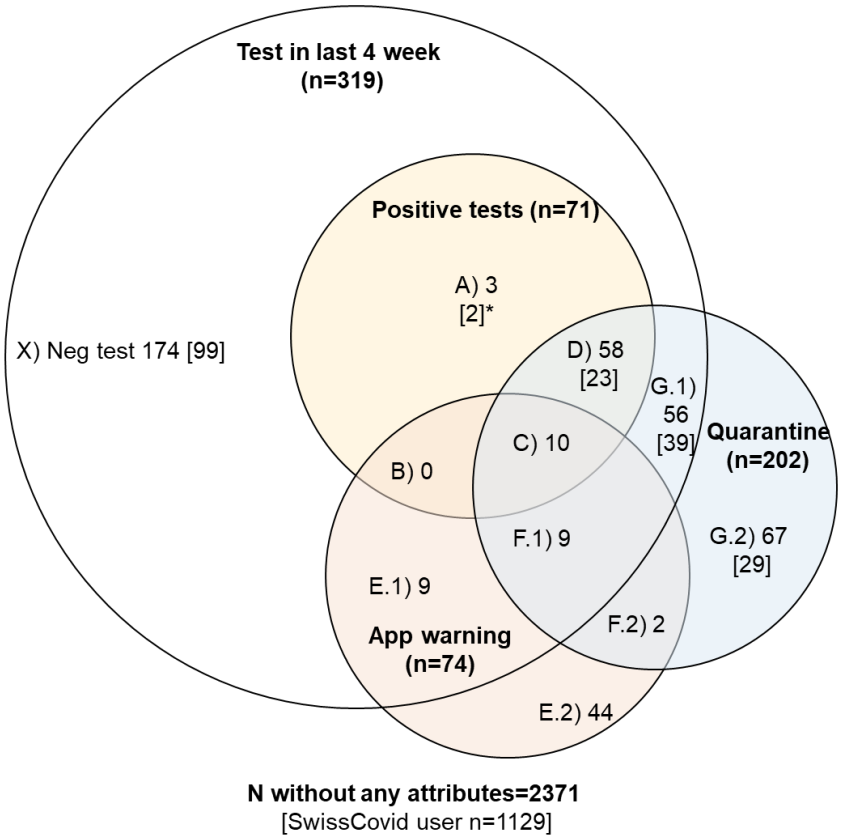

Figure 1: Venn diagram, based on data from the Covid-19 Social Monitor

Other studies have also looked into the third possible advantage of DPT, a better potential scalability in the face of rising SARS-CoV-2 case numbers. One study simulated the notification cascade using aggregated, publicly available and research data and an early analysis was already included in the report to the FOPH in November 2020 (https://medrxiv.org/cgi/content/short/2021.02.01.21250972v1).The primary intent of the simulation was to quantify the effect of SwissCovid notifications on pandemic mitigation in the Canton of Zurich. As main results, the study found that, for the month of September 2020, an equivalent of 5% of all persons in mandatory quarantine in Zurich received a recommendation for voluntary quarantine based on an app notification. Moreover, 30 persons tested positive for SARS-CoV-2 following an app notification. An extension of the analysis to October also revealed difficulties of the app notification cascade in adapting to the steeply rising case numbers in the second half of October 2020 and beyond.

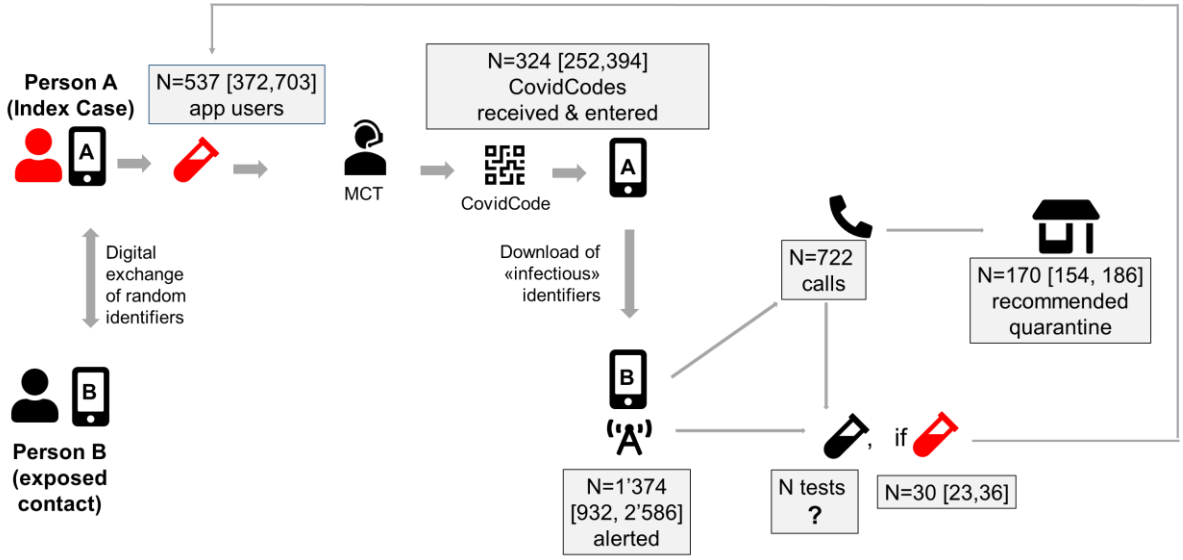

Figure 2: Simulation of notification cascade for the Canton of Zurich, September 2020. A description of the methodology can be found in https://medrxiv.org/cgi/content/short/2021.02.01.21250972v1

These findings revealed that the DPT notification cascade did not scale as hoped with rising case numbers. This is expressed, for example, by the ratio of entered CovidCodes over the number of SARS-CoV-2 cases dropping nationwide from 16.3% in September 2020 to 12.4% in the second half of October 2020. Along similar lines, while 6 in 10 positive tested app users entered a CovidCode in September, this value was closer to 4 in 10 persons in October according to the same study. Similar trends were noticed for other performance indicators such as the number of infoline calls per entered CovidCode. On the positive side, measures were undertaken to mitigate bottlenecks by scaling the infoline to handle higher call volumes and by allowing more health professionals to issue CovidCodes. Other delays were sometimes rooted in handling and turn-around times of SARS-CoV-2 PCR-tests. It seems that the broader availability of SARS-CoV-2 antigen rapid tests has also had a positive influence on the speed of the notification cascade, as evidenced by improvements in the time from symptom onset to CovidCode uploads in persons tested positive for SARS-CoV-2 (https://www.experimental.bfs.admin.ch/expstat/de/home/innovative-methoden/swisscovid-app-monitoring.assetdetail.14427231.html).

Despite these successes and a recent, predominantly positive echo of reports about SwissCovid effectiveness in the media (https://www.news.uzh.ch/de/articles/2021/Swisscovidapp.html), doubts seem to linger whether SwissCovid can make a useful contribution to pandemic mitigation. These doubts are also mirrored in regular surveys of the Covid-19 Social Monitor. A detailed analysis, based on data collected until October 2020 (https://publichealth.jmir.org/2021/1/e25701, confirmed by unpublished follow-up data) found that lack of perceived benefits as a major reason for not using the app (37% of all non-users), followed by the lack of a compatible phone (23%), and lingering privacy concerns (22%). The study concluded that removing major technical hurdles and addressing citizen's concerns about app usefulness and privacy may further increase app uptake. In addition, the study noted upshots in number of active app users following increases in daily case numbers, and also with the release of a new SwissCovid version that established compatibility with older iOS phones.

The doubts regarding usefulness or privacy should probably be tackled by more intensified communication about the benefits of SwissCovid and assurances regarding privacy. Ironically, it is the privacy-preserving nature of the app, which makes the demonstration of effectiveness quite complex. The app does not reveal any individual-level

information about the user, exposure risks, or how the app is utilized. Repeating this message, as well as the accumulating evidence of DPT effectiveness, in the public could help to create a more positive perception of SwissCovid. It seems that even most basic, easily accessible facts about SwissCovid, such as the nearly 1.9 million active users are currently not deeply anchored in the public. As revealed by a media analysis covering the first three months after SwissCovid release (https://www.medrxiv.org/content/10.1101/2020.10.22.20218057v1), there were and probably still are many misconceptions about the role and basic requirements for the app to work. For example, early modelling studies led by the University of Oxford pointed to a minimal required app coverage of 60% for apps to contain the pandemic – in the absence of any other mitigation measures! Unfortunately, the 60% were interpreted by many as an absolute threshold. Therefore, the comparatively high proportion of users of 22% is met with disappointments. Yet, several studies and experts have emphasized that, in conjunction with other pandemic mitigation measures, an app coverage of 20% should lead to noticeable effects on the pandemic.

Along the same lines, people voice disappointment about the numbers presented, for example, in the simulation of the app notification cascade study. While the findings seem small in absolute numbers, two additional aspects are important to stress. First, stopping transmission chains early will prevent further downstream transmission events that could have happened without intervention. Second, the contribution of SwissCovid is mostly in addition to those of other measures (such as mandated quarantine or testing). The results from the simulation of the notification cascade may point to an upper limit of effectiveness, but the evidence from studies such as the Social Monitor and ZSAC is aggregating and consistent: more than half of all persons with an app notification undertake some steps, namely calling the infoline and/or getting tested. It seems important to make these positive effects known, also because effectiveness of the SwissCovid app scales with its number of users.

3. Recruitment status of and planned analyses with the Zurich SARS-CoV-2 Cohort (ZSAC) Study

In all the investigations of SwissCovid effectiveness, the ZSAC study plays an important role. To our knowledge, it is one of only very few studies worldwide to research digital proximity tracing apps in the context of a population identified by manual contact tracing as 1) being SARS-CoV-2 positive (index cases) or 2) at risk due to close contact with SARS-infected individuals (close contacts). In our report of November 2020, we have already extensively described the recruitment methods and study population enrolled until September 30, 2020. The following section describes the further recruitment efforts and provides an update of key measurements reflecting app usage and compliance with recommended actions following an app notification.

Recruitment of ZSAC has officially come to an end by January 30, 2021. The latest tally (change since November report) includes 1005 (+678) index cases, 368 (+107) close contacts, and 103 (+28) index cases that converted from originally being traced as a close contact. These numbers show that recruitment of controls did not scale in parallel with enrollment of infected cases, which was owed mainly to external circumstances and scientific reasons. With the stark rise of SARS-CoV-2 incidence in October and November 2020, contact tracing increasingly reached capacity limits and had to reconsider priorities. For example, the contact tracing in Zurich prioritized informing infected cases as quickly as possible, which meant that fewer exposed contacts were notified and placed in mandatory quarantine. This drastically reduced the pool of potential study participants and increased the effort needed to enroll exposed contacts into ZSAC. Therefore, the ZSAC team decided to pause enrollment of exposed contacts in the months of November / December and to focus on the recruitment of index cases only. This decision was also steered by scientific considerations as the main study aims of ZSAC primarily focus on development of immunity and longer term health consequences in persons with SARS-CoV-2 infections. Enrollment of exposed contacts was successfully resumed again and prioritized in January 2021.

Overall, the recruitment efforts, which are co-financed by the FOPH, have led to a very unique and scientifically valuable population and data-base to investigate the use and effectiveness of SwissCovid. Descriptive analyses are displayed in the annex tables. Table 1 illustrates main characteristics of the ZSAC study population. Of note, 61% of all included persons report to use the SwissCovid app, which is higher than the national average (22%) and also that reported by the Social Monitor (45%, https://publichealth.jmir.org/2021/1/e25701). There are several possible explanations for this difference. First, published Social Monitor data (https://smw.ch/article/doi/smw.2020.20416) suggest that app users are generally also more compliant to other recommended prevention measures. These persons were probably also more likely to participate in the ZSAC study. Alternatively, it is also possible that app users indeed have higher exposure risks (which may be why they utilize SwissCovid) and are therefore more likely to become infected or identified as an exposed contact. It is not possible to fully disentangle the two effects, but most likely they both play a role.

Tables 2 (use of SwissCovid among index cases) and 3 (use of SwissCovid among close contacts) present both the descriptive statistics already provided in November 2020 and the updated numbers to illustrate the progress and highlight differences. Table 2 shows that a very high percentage of index cases who are SwissCovid users received and uploaded the CovidCodes. However, a slight drop was noted in the analysis of all enrollees (January 2021), which probably reflects the temporary bottlenecks described above.

Table 3 describes the compliance of exposed contacts with recommended actions following an app notification. Because the number of additional enrollments was limited, the descriptive statistics did not change markedly between the two reporting periods. Overall, 38% of exposed contacts that use Swisscovid have also received an app notification. However, compared with the interim analysis in November 2020, the proportion of persons receiving the app notification before being contacted by manual contact tracers has nearly doubled from 12% to 23%. This trend may indeed point to a possible role of DPT when MCT reaches capacity limits.

However, table 3 also underscores the need to increase our understanding of the exact sequence of different steps in the transmission and app notification cascades of index case – exposed contact pairs. For example, the data indicate that only around 1 in 3 app-notified, exposed contacts undertook actions such as calling the infoline or getting tested, which is substantially lower than what has been reported in, for example, the Covid-19 Social Monitor. As a next step, we are planning to investigate the cascade steps in greater detail and to stratify the analysis by different pandemic periods with respect to SARS-CoV-2 incidence and mitigation measures.

4. Outlook and remaining open questions

Almost 8 months after the release of SwissCovid, investigations into the effectiveness of DPT apps have made great strides, both in terms of methodological concepts and epidemiological impacts. The monitoring system, implemented by the Federal Statistical Office, as well as the research and data outlined above are providing sound evidence for a relevant impact of SwissCovid on the public. This should be reason for pride and encouragement of the public to increase the support of SwissCovid, but may also require targeted publicity efforts in news media.

Yet, many questions still remain to be addressed. For example, common criticisms of SwissCovid are concerns about high proportions of false positive app notifications, that is, fears that app notifications are not reflective of truly increased exposure risks. Preliminary analyses using Covid-19 Social Monitor data are ongoing. Moreover, as alluded to in section 3, further analyses are needed to investigate the sequence of exposure risk, notification, and preventive actions in greater details. To this end, additional analyses using confirmed index case –exposed contact pairs from the ZSAC study are in planning.

Table 1- Baseline characteristics of the study population

Variable	**Close contact**, N = 368	**Converted***, N = 103	**Index case**, N = 1005	**Overall**, N = 1476
Age, years (median-IQR)	39 (29 – 55)	45 (33 – 60)	51 (35 – 66)	48 (32 – 62)
Sex				
Female	183/368 (50%)	57/103 (55%)	508/1005 (51%)	748/1476 (51%)
Male	185/368 (50%)	46/103 (45%)	497/1005 (49%)	728/1476 (49%)
Education				
Mandatory school	13/368 (3%)	5/103 (5%)	40/999 (4%)	58/1470 (4%)
Vocational training/baccalaureate	132/368 (36%)	33/103 (32%)	430/999 (43%)	595/1470 (40%)
Technical college or university studies	223/368 (61%)	65/103 (63%)	529/999 (53%)	817/1470 (56%)
(Missing)	0	0	6	6
Employment status				
Employed	280/366 (77%)	79/102 (77%)	658/1 003 (66%)	1017/1471 (69%)
Student	46/366 (13%)	9/102 (9%)	44/1 003 (4%)	99/1471 (7%)
Unemployed	40/366 (11%)	14/102 (14%)	301/1 003 (30%)	355/1471 (24%)
(Missing)	2	1	2	5
Monthly household income				
<6000	120/352 (34%)	32/99 (32%)	327/954 (34%)	479/1405 (34%)
6000-12000	146/352 (41%)	45/99 (45%)	417/954 (44%)	608/1405 (43%)
>12000	86/352 (24%)	22/99 (22%)	210/954 (22%)	318/1405 (23%)
(Missing)	16	4	51	71
Nationality				
Swiss	320/368 (87%)	92/103 (89%)	864/1005 (86%)	1276/1476 (86%)
Non-Swiss	48/368 (13%)	11/103 (11%)	141/1005 (14%)	200/1476 (14%)
Chronic comorbidity				
At least one self-reported comorbid condition	78/360 (22%)	25/98 (26%)	301/973 (31%)	404/1431 (28%)

Variable	**Close contact**, N = 368	**Converted***, N = 103	**Index case**, N = 1005	**Overall**, N = 1476
No self-reported comorbid conditions	282/360 (78%)	73/98 (74%)	672/973 (69%)	027/1431 (72%)
(Missing)	8	5	32	45
Known exposure setting				
Knows or has strong suspicion	360/366 (98%)	96/103 (93%)	505/1002 (50%)	961/1471 (65%)
No	6/366 (2%)	7/103 (7%)	497/1002 (50%)	510/1471 (35%)
(Missing)	2	0	3	5
Exposure setting (among those with known/suspected exposure)				
Household	123/359 (34%)	55/96 (57%)	142/503 (28%)	320/958 (33%)
Workplace	48/359 (13%)	2/96 (2%)	73/503 (15%)	123/958 (13%)
Private setting	100/359 (28%)	26/96 (27%)	131/503 (26%)	257/958 (27%)
Public space	56/359 (16%)	9/96 (9%)	93/503 (18%)	158/958 (16%)
School/University	10/359 (2.8%)	0/96 (0%)	1/503 (0.2%)	11/958 (1%)
Other	22/359 (6%)	4/96 (4%)	52/503 (10%)	78/958 (8%)
Healthcare facility	0/359 (0%)	0/96 (0%)	11/503 (2.2%)	11/958 (1%)
(Missing)	1	0	2	3
SwissCovid app use				
App non-user	116/366 (32%)	39/102 (38%)	413/1004 (41%)	568/1472 (39%)
App user	250/366 (68%)	63/102 (62%)	591/1004 (59%)	904/1472 (61%)
(Missing)	2	1	1	4
Reasons for non use of the app				
No knowledge of the app	3/95 (3%)	2/31 (7%)	15/355 (4%)	20/481 (4%)
Perception of uselessness	21/95 (22%)	7/31 (23%)	109/355 (31%)	137/481 (28%)
Technical problems	25/95 (26%)	6/31 (19%)	93/355 (26%)	124/481 (26%)
Privacy and data protection	23/95 (24%)	10/31 (32%)	67/355 (19%)	100/481 (21%)
Other	23/95 (24%)	6/31 (19%)	71/355 (20%)	97/481 (20%)
(Missing)	21	8	58	87

* Converted refers to those identified as close contacts by contact tracing and that have tested positive either before or after enrolment

Table 2: CovidCodes received and uploaded by index cases who are app users

Variable	N = 249* (Nov. 2020)	N = 642* (Jan. 2021)
Received CovidCode	223/242 (92%)	536/641 (84%)
(Missing)	7	1
Uploaded CovidCode	214/223 (96%)	496/535 (93%)
(Missing)	-	1
Reasons for not uploading the CovidCode		
Did not work/Code invalid	3/8 (38%)	10/37 (27%)
Close contacts already informed and/or in quarantine	1/8 (12%)	4/37 (10%)
Was already in quarantine at time of diagnosis and/or had no contacts	-	9/37 (24%)
Received the code too late/Had already informed their contacts	2/8 (25%)	3/37 (8%)
Forgot to upload it	-	4/37 (10%)
Believed data has already been deleted	1/8 (12%)	1/37 (3%)
Does not know what will be triggered afterwards	-	1/37 (3%)
Not yet received	1/8 (12%)	1/37 (3%)
Thought the step will be done by the contact tracing team	-	1/37 (3%)
Was too sick to use the phone	-	1/37 (3%)
Was traced and told it is not necessary to enter code by the contact tracing team	-	1/37 (3%)
No reason given	-	1/37 (3%)
(Missing)	-	2

*Includes also “Converted” cases

Table 3: App warnings received and steps taken by close contacts who are app users

Variable	N = 192* (Nov. 2020)	N = 262* (Jan. 2021)
Received a warning by the app		
Yes, in the last 7 days probably because of the current contact	73/192 (38%)	94/262 (36%)
Yes, more than 7 days ago	2/192 (1.0%)	4/262 (1.5%)
No notification	117/192 (61%)	164/262 (63%)
Warned by the app before the cantonal medical service	9/73 (12%)	22/94 (23%)
(Missing)	2	4
Steps taken after receiving an app warning		
Called SwissCovid infoline	10/72 (14%)	13/78 (17%)
Other steps taken	14/72 (19%)	15/78 (19%)
No steps taken	48/72 (67%)	50/78 (64%)
(Missing)	3	20
Other steps taken		
Called cantonal medical service	1/16 (6.2%)	1/15 (6.7%)
Testing	1/16 (6.2%)	2/15 (13%)
Had already taken measure** after being traced by contact tracing	6/16 (38%)	12/15 (40%)
Had already taken measures** following family/friend's advice	6/16 (38%)	6/15 (40%)

*Includes also "Converted" cases for whom data as a close contact was available (i.e. converted after enrolment)

**Includes SARS-CoV-2 testing and quarantine

Annex 1: Questions related to the SwissCovid app for index cases

Gebrauch der SwissCovid App

Die SwissCovid App wird vom Bundesamt für Gesundheit herausgegeben, um Personen per Smartphone vor möglichen Ansteckungsrisiken zu warnen. Die App merkt sich, wenn ein Kontakt länger als 15 Minuten und näher als 1.5 Meter bestand. Wird bei einer Person mit der App das neue Coronavirus festgestellt, kann diese Person anonym andere App-Nutzerinnen/-Nutzer warnen, die sich während der Ansteckungsphase in ihrer Nähe aufgehalten haben.

1. Verwenden Sie die SwissCovid App?
- Ja, ständig
- Ja, aber manchmal schalte ich Bluetooth aus, um die Funktion der SwissCovid App zu unterbrechen
- Nein, ich habe die App wieder deinstalliert
- Nein, aber ich plane Sie zu verwenden
- Nein

2. Wenn 1=Nein
Weshalb verwenden Sie die SwissCovid App gegenwärtig nicht?
- Ich kenne die App nicht
- Ich denke nicht, dass die App für mich nützlich ist
- Ich kann die App nicht installieren (z.B. wegen technischer Probleme, weil ich kein Android oder iOS Smartphone habe)
- Ich fürchte um meine Privatsphäre und den Datenschutz
- Andere Gründe (bitte angeben)

3. Wenn 1=Ja
Hat die SwissCovid App schon mal eine Warnung ausgegeben, dass Sie mit einer mit dem Coronavirus infizierten Person in Kontakt waren?
- Ja, vermutlich wegen dem aktuellen Kontakt (d.h. in den letzten 7 Tagen)
- Ja, zu einem früheren Zeitpunkt (d.h. vor mehr als 7 Tagen)
- Ja, sowohl vermutlich wegen dem aktuellen Kontakt, wie auch schon einmal zu einem früheren Zeitpunkt
- Nein, ich hatte bisher keine Warnung

4. Wenn 3="Ja, aktuell" (Option 1 & 3)
Haben Sie eine Warnung durch die SwissCovid App erhalten, bevor Sie vom kantonsärztlichen Dienst kontaktiert wurden?
- Ja
- Nein

5. Wenn 4="Ja" (Options 1-3)
Welche Schritte haben Sie unternommen, nachdem Sie von der App gewarnt wurden?
- Ich habe die empfohlene Infoline SwissCovid angerufen
- Ich habe andere Schritte unternommen, und zwar Folgende (bitte angeben)
- Ich habe keine weiteren Schritte unternommen

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Annex 2: Questions related to the SwissCovid app for closed contacts

Gebrauch der SwissCovid App

Die SwissCovid App wird vom Bundesamt für Gesundheit herausgegeben, um Personen per Smartphone vor möglichen Ansteckungsrisiken zu warnen. Die App merkt sich, wenn ein Kontakt länger als 15 Minuten und näher als 1.5 Meter bestand. Wird bei einer Person mit der App das neue Coronavirus festgestellt, kann diese Person anonym andere App-Nutzerinnen/-Nutzer warnen, die sich während der Ansteckungsphase in ihrer Nähe aufgehalten haben.

1. Verwenden Sie die SwissCovid App?
- Ja, ständig
- Ja, aber manchmal schalte ich Bluetooth aus, um die Funktion der SwissCovid App zu unterbrechen
- Nein, ich habe die App wieder deinstalliert
- Nein, aber ich plane Sie zu verwenden
- Nein

2. Wenn 1=Nein
Weshalb verwenden Sie die SwissCovid App gegenwärtig nicht?
- Ich kenne die App nicht
- Ich denke nicht, dass die App für mich nützlich ist
- Ich kann die App nicht installieren (z.B. wegen technischer Probleme, weil ich kein Android oder iOS Smartphone habe)
- Ich fürchte um meine Privatsphäre und den Datenschutz
- Andere Gründe (bitte angeben)

3. Wenn 1=Ja
Haben Sie einen CovidCode erhalten (Freigabecode, den Sie von den kantonalen Behörden aufgrund des positiven Coronavirus-Tests bekommen, um über die App andere Personen zu warnen)?
- Ja
- Nein

4. Wenn 3=Ja
Haben Sie den CovidCode in der SwissCovid App eingegeben, um die anonyme Benachrichtigung anderer App-Nutzer/-Nutzerinnen zu aktivieren?
- Ja
- Nein

5. Wenn 4=Nein
Können Sie den Grund angeben, warum Sie den CovidCode nicht aktiviert haben bzw. nicht aktivieren konnten?

Freitext