

COVID-19 **CASE STUDY**

**ANALYSIS OF COVID-19 OUTBREAKS IN FOUR OF DISCOVERY'S
TEAMS FROM MARCH TO JULY 2020**

HOW THEY HAPPENED AND HOW FURTHER OUTBREAKS CAN BE AVOIDED



INTRODUCTION

An office meeting in which staff collaborate to create posters, disregarding physical distancing. Going to work while mildly symptomatic, 'to avoid missing work without good reason'. A staff birthday party in which cupcakes are handed out and a hug received. Handshakes between colleagues. Sharing transport to and from work. Sharing utensils and stationery. Colleagues interacting during breaks at work with non-adherence to physical distancing and wearing of protective masks. Colleagues assisting each other with work and touching each other's computer mouse or keyboard. Staff visiting shopping malls and later recalling touching their faces. Staff assuming that they have flu or bronchitis and coming in to work anyway. Attending social gatherings outside of the office on weekends. Misdiagnosis of COVID-19 symptoms as sinusitis. These are just some of the themes from COVID-19 mini-outbreaks in four of Discovery's teams.

Discovery has been monitoring all their employees nationwide for COVID-19 infection since South Africa's first cases were identified in March 2020. Soon after the COVID-19 pandemic hit South Africa's shores, four of Discovery's teams experienced outbreaks of COVID-19 infections.

One of the teams, Team 1 is located in Cape Town. The other three, Team 2, 3 and 4 are located at Discovery's Sandton office. Reasons for the spread of COVID-19 were identified through investigations into the outbreaks (some of which are listed above). These infection clusters provide opportunities for detailed investigation by in-house and associated experts.

Learnings extracted have guided tightening and adaptation of pre-existing protocols guiding COVID-19 prevention, mitigation and treatment. These protocols were already in place by mid-March 2020, when President Cyril Ramaphosa declared the pandemic a national state of disaster.

Discovery had put in place all the necessary preventive measures to curb the spread of COVID-19 in the workplace, such as spatial-separation policies for office-based employees, their face-to-face engagements and meetings. Despite this, infections continued to spread among employees. This was driven mainly by clear breaches in physical-distancing protocols, both inside and outside of the office, highlighting gaps in individual awareness and understanding of the need to adhere to preventive measures.

Discovery's response to these four outbreaks was overseen by our newly developed COVID-19 response service- Discovery COVID-19 Business Support. The is in partnership with MSO International and ensures ongoing workplace symptom and temperature screening, call centre triage, home-based self-quarantine or isolation, case management, contact tracing as well as an on-site response to an outbreak.



NATIONAL CONTEXT AT THE TIME OF INVESTIGATION

By 11 March when COVID-19 was declared a global pandemic by the World Health Organisation, Discovery ensured that preparedness plans were already in place to enable business continuity and to ensure employee safety. Preparations had already commenced by February 2020.

PREVENTIVE AND SUPPORT MEASURES

Discovery invested in the following:



Issuing **hand sanitisers** to all employees



Symptom and temperature **screening of staff upon arrival** at work and doing random in-office temperature checks



Providing education on **physical distancing, handwashing, cough etiquette and the wearing of cloth masks**



Reconfiguring office **furniture and equipment** to ensure **adequate spatial distancing.**



Hiring cars for essential staff to help avoid the use of public transport



Giving **regular advisory updates and webinars** for employees to ensure the highest possible awareness and education regarding COVID-19 as well as the evolving National regulations surrounding the pandemic.



Creating and distributing a **Manager's Guide to COVID-19 in the workplace**

Discovery also implemented further measures:



A COVID-19 Response Clinical Team was established to support employees and to manage positive cases and subsequent contact tracing.



All high-risk employees were prioritised for working from home. A list of chronic conditions considered to increase the risk for severe illness in the case of COVID-19 was circulated, with information about these conditions.



Employees were encouraged to approach their line managers in cases where their pre-existing conditions were not on the list but felt that they met criteria for consideration for working from home. This additional category was reviewed on a case-by-case basis guided by the COVID-19 Response Clinical Team



Discovery, in partnership with MSO International, developed Discovery COVID-19 Business Support a dedicated support for management teams. These services assist management teams in formulating and executing an effective response to COVID-19, to protect employees during this outbreak. A support centre of healthcare professionals at multiple levels of expertise support employees in terms of prevention methods, symptom identification, employee risk classification and testing, as well as mitigation against misinformation that can distract from clinical health prevention support.

MANAGEMENT OF EMPLOYEES SUSPECTED OF HAVING COVID-19 AT DISCOVERY'S OFFICES

■ *The management of employees suspected of having COVID-19 at Discovery's offices follows the following process:*

- Employees are screened for symptoms upon arrival at work. If an employee is found to have an elevated temperature (above 37.3 °C), or if they report possible symptoms of COVID-19, they are managed by Discovery COVID-19 Business Support. An employee with symptoms of COVID-19 detected upon arrival is assisted by the Group Facilities team and Occupational Health and Safety officers to immediately leave the office space. The employee is guided to get home safely and is advised to have a COVID-19 online doctor consultation or to contact their GP for screening and guidance about COVID-19 testing.
- The management of each employee's case includes manual contact tracing. This includes taking a thorough history to establish a list of close contacts within the office environment. Each close contact is informed that they have potentially been exposed to COVID-19. A verification of the nature of the close contact is done against the history given by the primary staff member case, Patient X.
- Close contacts are asked about current symptoms and they are advised to self-quarantine at home until Patient X's test results are returned. If Patient X's test result is positive, all close contacts identified are asked to remain at home for 14 days from the time of last contact. There is a follow-up with close contacts during the following 14-day period to assess any changes in their health status and to determine support required. If close contacts have developed symptoms of COVID-19, these individuals are guided to healthcare and testing, their close contacts are identified, and the process repeated.





PART 1: INVESTIGATION OF COVID-19 OUTBREAK IN CAPE TOWN – TEAM 1

At the time when outbreak investigators began their review into Team 1 outbreak (18 May 2020), national data showed that there were 16 433 known COVID-19-positive cases in South Africa and a total of 286 deaths. A total of 61.1% of confirmed cases and 58% of deaths were located in the Western Cape. As such, Discovery anticipated that the number of positive cases among the office-based employees in this province would likely be the highest.

DETAILS OF THE TEAM 1 OFFICE REVIEW PROCESS

Discovery's Cape Town-based cases were clustered within a single regional team, namely Team 1. The first, sporadic cases were identified in April 2020 and there was a rapid increase in cases by mid-May. This outbreak, confined to this office (there were no outbreaks in any other Western Cape-based Discovery offices at the time), proved an ideal opportunity for investigating the nature of the spread of COVID-19 among Discovery staff and to apply existing Discovery COVID-19 Business Support tools to prevent or mitigate future outbreaks.

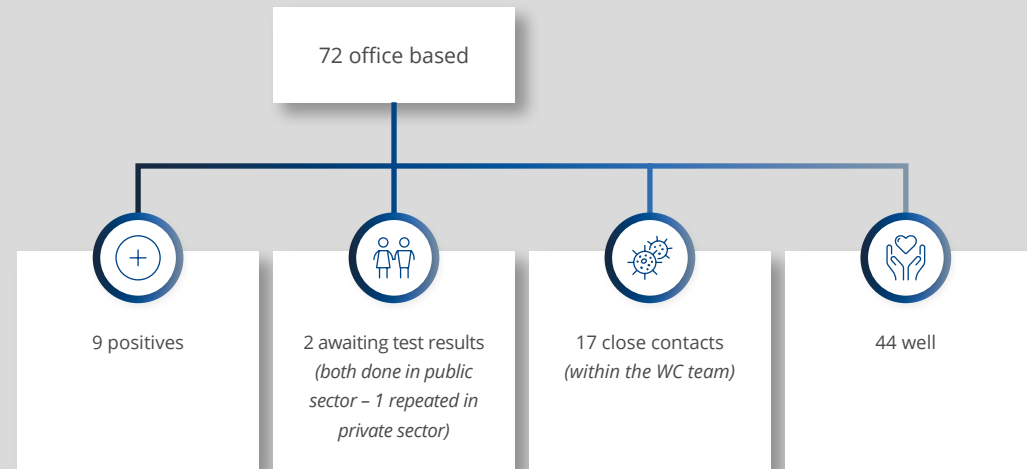
All of the Team 1 staff who tested positive for COVID-19 were identified from 1 to 18 May 2020. Their reported close contacts were contacted and assessed by an expert three-person Discovery investigation team.

There are 139 employees in this Discovery essential services team. At the time of this review (during alert level 5 and 4 of the national lockdown period), 72 staff members were office-based. Discovery COVID-19 Business Support protocols around the identification and management of at-risk employees were in place. As a result, 67 employees were identified as being at high risk for severe illness if they contracted COVID-19 (60 years or older or having co-morbidities, or both risk factors), and they were asked to from home.

The Employer Zone on the Discovery website enables Discovery Health Medical Scheme employers to identify high-risk employees and to support them to stay healthy by encouraging working from home and other preventive measures.



SOURCES OF INFECTION OF POSITIVE CASES



When this review began, nine of the 72 office-based Team 1 team members had tested positive for COVID-19 and two were awaiting test results.

A total of 17 close contacts were linked to the collective 11 individuals identified. All 28 affected employees were at home in self-quarantine or self-isolation.

The last date in the office for the nine positive cases ranged from 20 April 2020 to 13 May 2020. One case could not be reached at all. None of the cases resulted in severe illness or hospitalisation. For the majority, most symptoms had resolved by the time they were contacted by the review team, although they were still within their 14-day isolation period.

The two suspected cases awaiting test results were not directly linked to any source of infection in the office, both being identified after they had become symptomatic. This pair originally opted to be tested at public-sector facilities due to convenience, but had struggled to get results. One subsequently retested at a private facility and expected results soon. In both cases, symptoms had resolved during the review period.

Of the 17 close contacts identified and reviewed, one was unreachable, one asymptomatic employee was able to access testing for COVID-19 (despite guidelines only recommending testing of symptomatic individuals) and one person was symptomatic despite a negative COVID-19 test result. Four close contacts reported having developed mild symptoms, but it could not be established via a telephone call if symptoms were related to COVID-19 or to possible anxiety. To err on the side of caution, all four of these cases were immediately identified for case management by Discovery COVID-19 Business Support and they were referred for screening to determine eligibility for testing.

SUPPORT PROVIDED BY DISCOVERY TO INFECTED AND AFFECTED STAFF

- The Cape Town review team identified the close contacts mentioned above through manual contact tracing. The reviewers also facilitated advice on prevention, testing, home-based isolation and case-management. Although all of the 28 cases were already being managed by the partner care teams, the investigators made independent phone calls, over a three-day period, to each of the positive cases and close contacts to verify their history and dive deeper into the nature of each person's possible exposure.
- The information from both the infected employees and their close contacts was cross checked and verified, while any new close contacts revealed in the process were investigated. Current symptoms, medical complications or episodes of hospitalisation were assessed, and education was provided where necessary. All findings were reviewed against the database kept by the Discovery COVID-19 Business Support team. Data privacy was respected at all times.
- In line with Discovery COVID-19 Business Support protocols, those staff members who showed even mild symptoms of COVID-19 or who were identified as close contacts of others who had tested positive, were immediately sent home for 14 days of self-quarantine.
- The employees were also informed of the Discovery 24/7 COVID-19 hotline, where a dedicated team was available for any further guidance.
- Case managers were assigned to check in daily on all employees with suspected or confirmed cases of COVID-19. Case managers also provided clinical advice on potential symptoms of illness, severity of illness, as well as how to navigate Discovery's benefits and full-cover options. Case managers facilitated access to testing and provided ongoing support and progress tracking, ultimately confirming the point at which it was safe for a staff member to return to work.





DETAILS OF EMPLOYEES WHO CONTRACTED COVID-19

REVIEW OF PROBABLE SOURCES OF INFECTION AMONG EMPLOYEES

- One employee had travelled to a funeral in the Eastern Cape a few days before becoming symptomatic. She then attended an induction session at the office on Monday and left the office that same day because she was feeling unwell. It is most likely that she had contracted the COVID-19 virus before going to the office on the Monday. She had been out of the office for five days before becoming unwell.
- Two employees had come into contact with staff who tested positive for COVID-19 elsewhere in Discovery- not Team 1 staff members. They associated this transmission with either shared travel or interaction during breaks with acquaintances from other teams.
- Three employee cases were linked to:
 - Sharing of food and utensils
 - Interaction during a training session (*induction session – detail below)
 - Using the same pen to sign for the daily food offering
- Three employees believed they had become infected at the office but could not confirm a known contact or source. There was no history of interaction by these employees with a person who had contracted COVID-19.
- Two employees believed they had come into contact with the COVID-19 virus while using public transport.

CLOSE CONTACTS

- Seven close contacts were listed. Their contact was due to travelling with one of the known positive cases in the team. The length of time of travel was more than 15 minutes in all situations and the reason cited was daily travel to and from work.
- One close contact met an employee outside the office on a weekend.
- Four close contacts emanated from a social gathering held at the office by employees to celebrate a birthday.
- Four close contacts emanated from an induction session (*detail below).
- One close contact was exposed while offering assistance to a co-worker, which involved touching the person's mouse and keyboard.

SPECIFIC GROUPS



***INDUCTION SESSION 11 TO 13 MAY 2020**

This induction session was held over three days, in a closed room, and involved certain role-players coming into the office from home to facilitate the session.

The team members were well distanced during the session and masks were used. However, there were times when they were required to make posters. With many people hovering over one poster while working on it, they breached the separation guideline of one metre between people.

At the time of the review, this group had one confirmed positive case of COVID-19, one person awaiting results, one who appeared symptomatic and was referred for testing, as well as a contact outside this induction meeting who tested negative but was overtly symptomatic (false negative cannot be ruled out).



BIRTHDAY CELEBRATION

A group celebrated a birthday on 13 May 2020. This involved handing out food and cupcakes and giving a hug. The person in this group who tested positive had a total of five close contacts as a result of this social interaction.



COMING TO WORK WHILE SYMPTOMATIC

- One person went to the office for nine days while symptomatic. She felt sick intermittently and didn't want to miss work unnecessarily. As a result of her illness, the group of close contacts from the birthday party was identified for home-based quarantine.
- One person continued to go to the office for five days despite feeling unwell. Symptoms were mild and, as such, were attributed to seasonal allergies.
- Two staff members went to the office for one day while they were symptomatic.
- General feedback showed that staff members were under the impression that visibly absent 'positive' cases were away from the office due to flu and bronchitis, so the team assumed their symptoms were similar. Therefore, they continued going to the office.

FACTORS THAT INFLUENCED THE ACCELERATION OF THE CAPE TOWN INFECTION

To determine the factors linked to the acceleration of the Cape Town infection, a review was conducted of the office seating arrangements against the identified cases and the close contacts. Staff desks in the Team 1 office were widely spaced, as recommended, and a time and motion study found that office seating had no obvious relation to transmission. No obvious relation was evident from the pattern of transmission and the close contacts identified, except for one close contact who sat next to a positive case and shared stationery and worked on the same keyboard and mouse.

Transmission was, therefore, not linked to inadequate spatial separation in the Cape Town office, but rather due to the breach of physical-distancing policies and protocols.

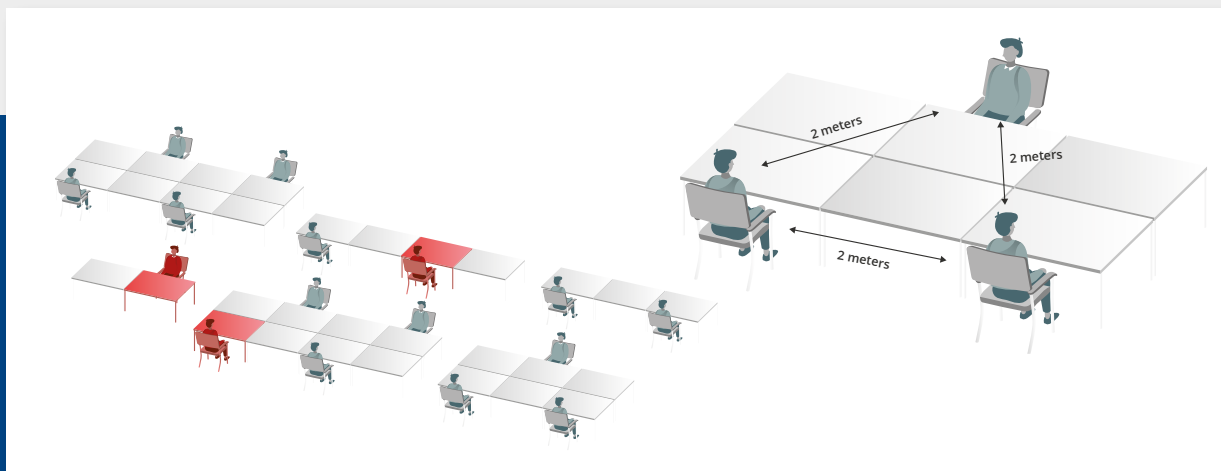


Figure 2. Section of the office plan for the Team 1, showing occupied and open desks spaced two meters apart



POSSIBLE SOURCES OF INFECTION IDENTIFIED:

The spread of COVID-19 in this team was linked to breaches of physical-distancing policies and protocols. This included:

- Staff travelling together
- Touching each other's utensils and sharing utensils at a birthday celebration
- Close contact during team exercises

The investigation also revealed that some employees didn't fully understand the importance of:

- Social (physical) distancing
- Early detection and reporting of suspected symptoms of COVID-19.



PART 2: INVESTIGATION OF COVID-19 OUTBREAKS IN JOHANNESBURG

Three Discovery team cohorts located at 1 Discovery Place in Sandton experienced COVID-19 outbreaks from 24 March 2020.

JOHANNESBURG REVIEW 1: COVID-19 CASES IN TEAM 2

A new initiative introduced in Discovery saw the establishment of a 34-person team, specifically to handle the supply of pulse oximeters to qualifying medical scheme members who tested positive for COVID-19.

On 23 June 2020, a team member of Team 2 tested positive for COVID-19, and a number of team members were identified as close contacts. This initiated an investigation into a possible outbreak in this team to determine whether the spread of the COVID-19 virus was linked to work-related or external factors. The investigation was also aimed at targeted mitigation of the spread of COVID-19 in the workplace.

- From Monday, 2 June to Friday, 5 June 2020, the staff cohort was trained on COVID-19 initiatives. This included safety guidelines, mask wearing, physical distancing, and so on. Over the following two weeks, there was on-boarding, orientation and equipment set-up, but system and equipment challenges led to staff members assisting one another.
- On 21 June 2020, a member of the cohort – Patient X – experienced a mild cough and congestion. Her doctor diagnosed sinusitis and sent her for a COVID-19 test as a precautionary measure, but assured her the symptoms were unlikely to be related to COVID-19. Two days later, on 23 June, a close contact of Patient X started to feel ill and experience fever. This close contact was sent home.
- Then, Patient X informed her team leader that she had tested positive for COVID-19. The entire team was then sent home.
- Three more members of the team began to experience mild symptoms, and two subsequently tested positive for COVID-19.
- Three positive cases emanated from this 34-person team. None experienced severe illness or required hospitalisation.
- A total of 33 close contacts were identified from Patient X. Two (colleagues) tested positive, while 29 were asymptomatic and self-isolated for 14 days.

POSSIBLE SOURCES OF INFECTION IDENTIFIED FROM THE THREE STAFF CASES ASSOCIATED WITH PATIENT X:



Having lunch together (no physical distancing or masks worn during this time)



Possible sharing of headsets



Assisting with charger cables



Travelling together by shuttle



Close contact between staff to assist one another because of system issues

A review was conducted of office seating arrangements against the case identified and the close contacts. The review showed that transmission was not linked to inadequate spatial separation in the office but rather due to the breach of physical distancing policies and protocols.



OPPORTUNITIES FOR IMPROVEMENT



More active staff vigilance



Additional support for team leaders to assist with overseeing a large staff cohort



Increased awareness around adherence to physical distancing

JOHANNESBURG REVIEW 2: COVID-19 CASES IN TEAM 3

From 4 June to 23 June 2020, three positive COVID-19 cases were identified in the 22-person Team 3. A review of the team’s COVID-19 status was initiated on 3 July 2020 after a rapid increase in the number of cases in this team. The review aimed to determine whether the spread of COVID-19 among members of this team was due to office-related or external factors, and to allow for targeted mitigation of the spread of COVID-19 in the workplace.

All 22 team members were all already at home in self-quarantine or self-isolation during the review period. They were also being managed by the partner care teams because the team included staff who had tested positive for COVID-19, persons under investigation (PUIs) and close contacts.

The review process involved independent phone calls to each of the staff members who had tested positive for COVID-19 to check on their health status and medical care, to better understand the nature of their exposure, to confirm close contacts identified and to update the close contact list where necessary.

The three staff members who tested positive generated a list of 17 close contacts. Close contacts were then called to review their health status, verify the case history and dive deeper into the nature of the possible exposures. Health education was offered where required. All findings were reviewed against the database that is kept by the Discovery COVID-19 Business Support team.

POSSIBLE SOURCES OF INFECTION IDENTIFIED AMONG STAFF WHO TESTED POSITIVE FOR COVID-19



Visiting shopping malls



Touching their face while in a shopping mall



Going to the office while symptomatic



Assisting a colleague with system issues



Handshaking among colleagues in the team



Not adhering to physical distancing or not wearing personal protective equipment such as protective masks



Sharing travel to work (arranged to avoid the use of public transport)



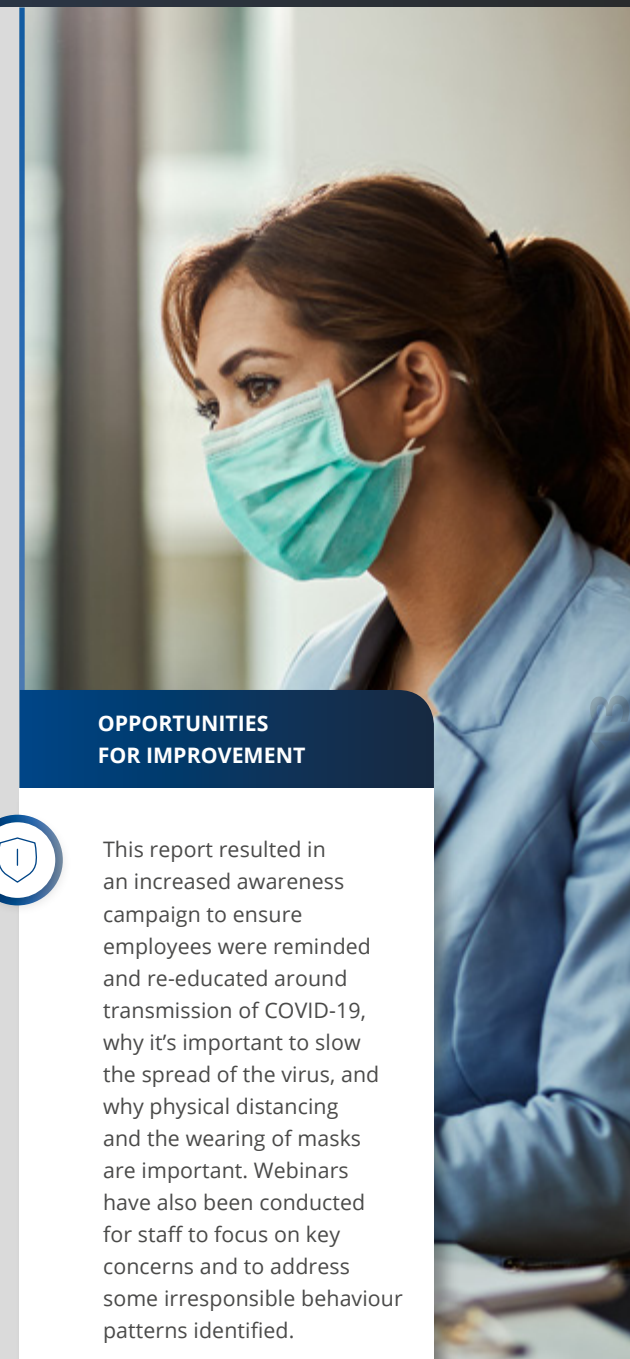
Sharing devices like a keyboard or mouse

A review of the office seating arrangements found that transmission was not linked to inadequate spatial separation in the office but was rather due to the breach of physical-distancing policies and protocols.

OPPORTUNITIES FOR IMPROVEMENT



This report resulted in an increased awareness campaign to ensure employees were reminded and re-educated around transmission of COVID-19, why it's important to slow the spread of the virus, and why physical distancing and the wearing of masks are important. Webinars have also been conducted for staff to focus on key concerns and to address some irresponsible behaviour patterns identified.





JOHANNESBURG REVIEW 3: COVID-19 CASES IN TEAM 4

A review of positive COVID-19 cases and close contacts in Team 4 was initiated following a rapid increase in the number of cases emanating from this team. The review aimed to determine whether cases were increasing due to work-related or external factors, particularly to allow for targeted mitigation of the spread of COVID within the workplace.

From 24 March to 2 July 2020, 12 positive cases of COVID-19, 16 persons under investigation (waiting for test results) and 29 close contacts were identified. These were all requested to self-isolate. One staff member required hospitalisation following difficulty breathing.

The 36 employees included in this review were already in home-based quarantine or isolation during the review period and had experienced symptoms at the time of being contacted by the review team. The review process involved independent phone calls to each of the staff members who had tested positive for COVID-19 to check on their health status and medical care, to better understand the nature of their exposure, to confirm close contacts identified and to update the close contact list where necessary.

Close contacts were then called to review their health status, verify the case history and dive deeper into the nature of the possible exposures. Health education was offered where required. All findings were reviewed against the database that is kept by the Discovery COVID-19 Business Support team.

POSSIBLE SOURCES OF INFECTION IDENTIFIED AMONG STAFF WHO TESTED POSITIVE FOR COVID-19:

In three cases, staff who contracted COVID-19 had prior contact with others who had subsequently tested positive for the disease (a staff member's son, a treating doctor, and a cousin with whom the respective staff had travelled). In the majority of cases, no sources of infection could be identified. Eight staff members tested positive after the onset of symptoms, and one staff member tested positive only because this was a mandatory test ahead of an elective medical procedure.

In the case of close contacts identified, 10 had been in direct contact with other staff members.

Once again, a review of the office seating arrangements found that transmission was not linked to inadequate spatial separation in the office but was rather due to the breach of physical-distancing policies and protocols.

CONCLUSION

Despite the preventive measures in place at Discovery's offices – including spatial-separation policies for day-to-day work, face-to-face engagements and meetings – COVID-19 infections continued to spread among employees. This was driven mainly by clear breaches in physical-distancing protocols, both inside and outside of the office environment.

All four reviews featured concludes that modes of transmission are not related to the office layout or inadequate spatial separation.

Investigations were carried out specifically to allow for targeted mitigation of the spread of COVID-19 within the workplace. Overall, the review process has resulted in an increased awareness campaign to ensure employees are reminded and re-educated about transmission of the coronavirus. Staff members are encouraged to report even mild symptoms of COVID-19 prior to coming to work, to stay home and not to return to work unless given the all-clear by a medical expert working in partnership with on-site Discovery COVID-19 support teams. Webinars for staff have been conducted to focus on specific concerns and to address irresponsible behaviour patterns that had been identified.

These opportunities for improvement have been highlighted across the board:



More hands-on leadership



Proactive education on COVID-19 infection control



Active staff education around **physical-distancing and hygiene practices** in the office and outside of work



Active **staff education** around avoiding the sharing of equipment



Increased emphasis on and education around **reporting any possible COVID-19 symptoms and staying away from the office when symptomatic**

We are committed to the continuous improvement of all protocols in place to ensure that we continue to minimise the spread of COVID-19 and prevent any future outbreaks in Discovery's teams.



SUPPORTING EMPLOYERS WITH DISCOVERY COVID-19 BUSINESS SUPPORT

Discovery Health has developed a comprehensive set of COVID-19 support services to assist employers and their management teams in formulating and executing an effective response to COVID-19 as employees return to work, given the importance of protecting employees, and ensuring the continuity of business operations. These services include a set of Core and Additional services. The cost of the Core COVID-19 Business Support services are covered by the Discovery Health Medical Scheme for employees that are members of the Scheme. The cost of the Additional services are quoted separately depending on the employers' requirements.


<p>01 DAILY SCREENING</p> <ul style="list-style-type: none"> Risk assessment Capture on-site temperature check Daily screening status <p>CORE</p> <p><i>Immediate employer alert and case management if red status</i></p>	<p>02 CALL CENTRE TRIAGE</p> <ul style="list-style-type: none"> Clinical advice and guidelines Telephonic screening, triage and referrals, for suspected cases Navigation to testing <p>CORE</p> <p><i>24/7 COVID-19 hotline</i></p>	<p>03 CASE MANAGEMENT</p> <ul style="list-style-type: none"> Ongoing support for positive cases including daily check-ins Navigation to isolation hotels <p>CORE</p> <p><i>Team of clinical resources</i></p>	<p>04 CONTACT TRACING</p> <ul style="list-style-type: none"> End-to-end workplace contact tracing Implementation by Discovery in partnership with a specialist managed care organisation Contact tracing toolkit <p>CORE</p> <p><i>Specialised contact tracing and support team</i></p>	<p>05 ON-SITE OUTBREAK RESPONSE</p> <ul style="list-style-type: none"> On-site screening, testing and contact tracing Advice on office closure and return to work Facilitation of office sterilisation Regulatory reporting <p>ADDITIONAL</p> <p><i>Outbreak management on-site team</i></p>
<p>06 COVID-19 INFORMATION HUB</p> <p>CORE</p>	<p>07 HIGH RISK MEMBER MANAGEMENT</p> <p>CORE</p>	<p>08 SUPPORT FOR EMPLOYEE WELLBEING</p> <p>CORE</p>	<p>09 EMPLOYER ALERTS AND REPORTING</p> <p>CORE</p>	<p>10 COVID-19 CONSULTING SERVICES</p> <p>ADDITIONAL</p>

CORE SERVICES

The cost of the Core Services are covered by the Discovery Health Medical Scheme for employees that are members of the scheme. For employees that are not part of the Discovery Health Medical Scheme, a quote will be provided on request, at a rate of **R50.40 per employee per month** for the full Core Services package. The cost of services 1,2,3,4,7 plus the contract tracing toolkit can be quoted for separately at a rate of **R20.64 per employee per month**.

ADDITIONAL SERVICES

These services will be quoted based on the unique needs of the employer.

 For more information please email CovidBusinessSupport@discovery.co.za

