

From Bhopal, with love.

*A community-led initiative to protect against the novel coronavirus,
developed by the Sambhavna Clinic, Bhopal*

The Bhopal Medical Appeal

ABOUT THIS BOOKLET

The COVID-19 situation in Bhopal, like everywhere, is changing all the time and this booklet is a snapshot of our work to date.

The plan given here applies to Bhopal and the protection of the Bhopal survivors, whose medical care and relief is the purpose of our organisation. Many experts and organisations have contributed to these ideas, which we believe can be adopted and adapted to any community, large or small.

Therefore we offer our this work as a gift to everyone around the world fighting to prevent transmission of the novel coronavirus and to protect each other from COVID-19.

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26 years of the Bhopal Medical Appeal



We shared the tragic story behind this terrible and tender image in our first appeal. It was taken by Magnum photographer Raghu Rai on the morning after that night of prodigious horror in Bhopal, December 3rd, 1984, when 16 square miles of the city were engulfed by a cloud of poison gas that gushed, without warning, from a factory belonging to Union Carbide Corporation.

Thousands died in the most hideous ways. As the sun rose on streets full of corpses, Raghu found himself in a stony graveyard where a man was burying his young daughter. The father had covered the tiny body but then, unable to bear parting from her, brushed the earth away for one last look.

For the Bhopalis this photo has come to symbolise 36 years of unimaginable suffering, an injustice that has never been righted, crimes that continue to go unpunished, and a community that most of the world has forgotten.

Today in Bhopal well over 120,000 people are still chronically sick. Another 100,000 live in communities where wells and standpipes are contaminated by chemicals leaking from toxic wastes dumped in and around the same accursed factory, which remains derelict and full of poisons.

Of 574,375 officially-recognised survivors of that night, more than nine in ten were awarded compensation of £380 for lifelong injuries. Union Carbide and its owner Dow Chemical continue to deny responsibility for the water poisoning, and refuse to clean up the factory, pay more compensation, or appear in court where charges of manslaughter, among other crimes, remain pending.

Our founding appeal told the story of the first decade of the disaster: the chaos, lack of proper care, disdain for the poor, the wrecked lungs, cancers, horrifying births.

Over those first ten years Bhopal suffered on average three gas-related deaths every day. Survivors were regularly prescribed drugs that they didn't need and which in some cases actually harmed them. Being mostly very poor, they were often treated rudely. As government doctors would refuse to touch them, routine chest, pulse or abdominal checks would be left undone.

Betrayed by every authority, the survivors turned to each other, and to us. The generous response to our first appeal enabled them to buy a building, hire medical staff and begin training. In 1996 the Sambhavna Clinic* opened its doors, offering a combination of modern medicine, ayurvedic herbal treatments, yoga and massage. All consultations, treatments, therapies, and medicines are absolutely free, and our Clinic has now given medical care to around 65,000 people. Many of the clinic staff are themselves gas or contaminated water-affected.

In 2004, two Bhopali women were awarded the prestigious Goldman Environmental Prize. They gave their entire \$125,000 prize money to help children of parents exposed to Carbide's poisons. Their Chingari Children's Rehabilitation Centre** offers up to 250 damaged kids therapies and special education each day. Our work has won many major humanitarian awards, but the suffering and the need in Bhopal continues to be intense. 120,000 people are still chronically ill. Babies are still born damaged.

* The Hindi words 'sama' & 'bhaavana' mean 'similar feelings' or 'compassion'.

** Chingari hails from the slogan 'Hum Bhopal ki nari hai, phool nahi chingari hai' — 'We are the women of Bhopal, we are flames, not flowers'.



Sambhavna Clinic staff gather together in 2019



Chingari staff and children celebrate the Centre's 10th anniversary (2016)

No us & them. All of us, together

The Bhopal Medical Appeal is an effort of ordinary people round the world to bring free medical help to victims of the gas and water disasters. Who are we? We're survivors, Sambhavna and Chingari staff in Bhopal, donors, volunteers, supporters and organisers in the UK and elsewhere.

We're all equal, all together, and all together we're the Bhopal Medical Appeal.

To join us, visit www.bhopal.org/donate

At the mercy of another invisible killer

Preface

The December 2nd/3rd 1984 gas disaster left behind what may currently be the most at-risk population on earth.

Exposure to Union Carbide's gas left over half a million Bhopal survivors with permanent injuries that greatly heighten their vulnerability to the SARS-COV-2 virus and increase the likelihood of critical illness.

General rates of illness are 63% higher among gas survivors, and are especially pronounced in those exposed to Union Carbide's gases as children, who most commonly suffer breathlessness, chest pains, and panic attacks.

Thirty-six years on over one-in-two suffer lung and cardiovascular problems, whereas one-in-six have diabetes. A recent study by Sambhavna Trust medical researchers finds survivors three times as likely to die of kidney disease, and twice as likely of cancer and illnesses such as TB due to impaired immune systems that are likened by doctors to a form of 'Chemical Aids'.

Possession of two co-morbidities, according to research, increases the risk of fatality from Covid-19 by two and a half times. As the majority of gas survivors present multiple co-morbidities, and as it emerges that a severe SARS-COV-2 infection – like MIC gas exposure – can result in multi-systemic damage to the body, medical workers insist that Bhopal gas survivors are at least five times more vulnerable to Covid-19.

The most severely gas-affected live in some of the planet's poorest communities. Characterised by cramped, makeshift housing squeezed within narrow, overcrowded alleys, entire families often inhabit single rooms. Inside these communities there is next to no access to clean running water, and more than half depend upon hard manual labour for daily income.

Here, within these congested neighbourhoods, the novel coronavirus has the potential to race through uncontrollably, like wildfire through a parched forest.

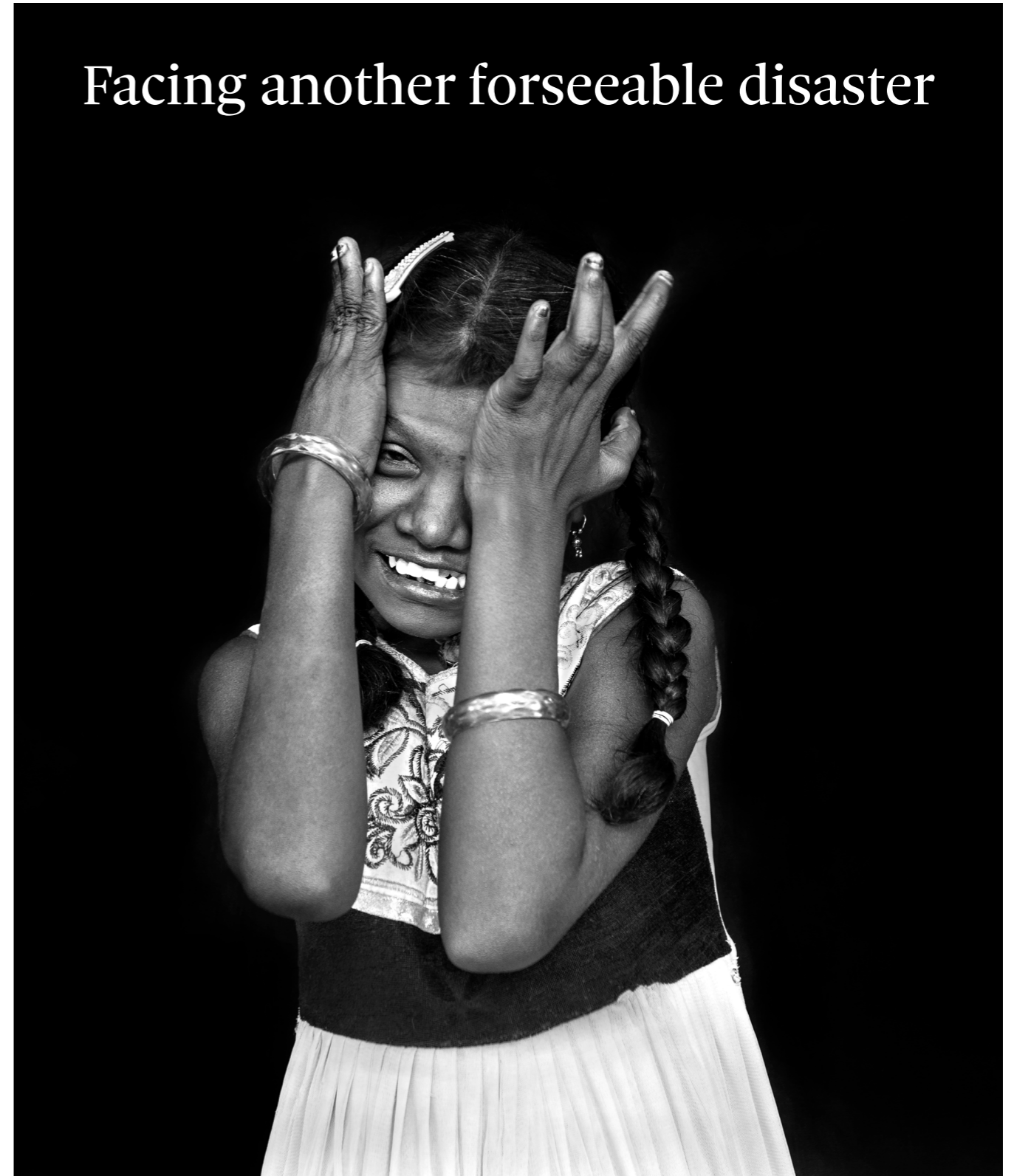
Survivors of the world's largest industrial massacre thus are now, in the shadow of this pandemic, facing a second monumental disaster.



Doctors at the Chirayu Cancer Hospital in Bhopal examine an X-ray of a patient with chronic respiratory problems who lives in one of the neighbourhoods outside the walls of the abandoned Union Carbide chemical factory.

©Judah Passow/
Bhopal Medical
Appeal

Facing another foreseeable disaster



Rajni Panthi, 22, was born with mental development issues and impaired hearing. Prior to the pandemic she came each day to our Chingari Childrens' Rehabilitation Centre for audio therapy. Given the elevated risks to disabled children, on March 16th Chingari closed the doors of its Centre and embarked on a community support program together with the Sambhavna Clinic. Each day Chingari staff criss-cross local neighbourhoods, providing home-based therapies to vulnerable children.

Rajni lives in Gareeb Nagar ('Poor Town'), a neighbourhood near the Union Carbide plant whose groundwater is contaminated with toxic chemicals. Part of her community stretches along the eastern bank of the factory's largest 'Solar Evaporation Pond', an artificial lake that gave Carbide its 'most economical solution' to the lack of a nearby river for dumping poisonous wastes generated by routine operations.

Gareeb Nagar is one of the communities currently being protected by a 'Community Shield' raised by scores of local volunteers, working alongside staff from Sambhavna and Chingari. ©Judah Passow/Bhopal Medical Appeal



When one depends upon all

Introduction

The novel coronavirus pandemic impacts every community on earth. Normality is upended, security imperilled, and wellbeing violated.

The crisis has also brought rediscovery and renewal of our feelings of common connection and of care for each other. This booklet is offered in the same spirit. It describes a five-step programme of action undertaken by volunteers to protect the most vulnerable within their communities. The mobilisations have been successful enough that district authorities are turning to organisers for guidance on how to replicate them. Their results have been so persuasive that a detailed action plan—drawn up by community health workers leading the volunteer programme—has been agreed and taken on by local health officials.

Lacking the natural defences to stave off the virus, Bhopal survivors knew that personal safety depended upon collective action. They share this booklet freely, with the hope that their experiences offer practical insights that may be adapted and adopted at negligible cost, using existing tools and strengths, to help others working to raise a community shield against Covid-19.

Weeks of shoe-leather and shoestring work across local communities, linking scores of volunteers with experienced community health workers has, at time of writing, limited outbreaks of Covid-19 in the 15 participating neighbourhoods to just thirty three people, all but two of whom have now recovered.

A decentralised form of public health intervention is now widely recognised as essential for safely easing lockdown measures while suppressing additional waves of infection. A clue to the success of this approach in Bhopal lies perhaps within the word community itself, which derives from two roots. The first, ‘with, together’, the second ‘fortify, strengthen, defend’.

‘Protection from the spread of Coronavirus’, says Sambhavna and Chingari’s action plan, ‘is within everyone’s reach.’ Among familiar, friendly faces trust grows readily, and with it a deep sense of collective responsibility. ‘Key to the wellbeing of one,’ the action plan insists, ‘is the participation of all.’

No plan, no information, no reason

COVID-19 Bhopal timeline

With around 2.8 million people, Bhopal’s population is twice as large as the UK city of Birmingham. Half a million are gas survivors. Of those, over 400,000 are registered for treatment at local hospitals.

January 30th: First coronavirus case reported in India

March 12th: First Covid-19 death reported in India

March 16th: Chingari closes for all but essential cases and joins a meeting at Sambhavna to agree a plan of action

March 17th: Total cases in India pass 150

March 18th: Sambhavna begins implementing agreed measures, ie. installation of homemade handwashing stations in local communities

March 19th: Sambhavna sets up local volunteer network to educate residents on coronavirus, distribute information leaflets and report and monitor symptoms

March 21st: Survivor groups in Bhopal write a letter to the state & central governments warning of survivors’ unique vulnerability

March 21st: Sambhavna and neighbourhood committees setup their first WhatsApp group for sharing local news, reporting individual symptoms and quickly mobilising support

March 23rd: First coronavirus case identified in the city of Bhopal

Survivors tried to warn of an impending health catastrophe in Bhopal. Shortly after the first Covid-19 death in India, their organisations wrote to local and national health ministers urgently emphasising the danger to 574,375 people officially left damaged by Union Carbide’s gases.

In the city’s seven gas relief hospitals and eight community units, the letter observed, there were no social distancing measures or hand-washing stations. Only two offered advice on coronavirus. It urgently advised a program of public health education, identification, testing, tracing and treatment, and proposed conversion of an existing 50 bed Pulmonary Medicine Centre into a unit for isolation, testing and intensive care.

The most vulnerable groups should be properly identified, the letter said. They included over 60’s with existing health conditions due to gas exposure, such as diabetes, hypertension, COPD, heart and kidney problems, and cancers. As the majority were already computer-registered with gas relief hospitals the work could be completed in a week.

Protection should be provided in the form of safe isolation, either at home or in community-based quarantine spaces. Food and water must be supplied as needed and a helpline established for rapid medical assistance. Those suffering chronic health conditions should be given prompt medical care without the need to visit hospitals, thereby risking exposure and infection. State medical teams should be mobilised for home care.

The intensive care unit required isolation wards, ventilators, medicines and oxygen dedicated to the treatment of survivors critically ill with symptoms of Covid-19. Other needed steps included increased testing and reporting of symptoms and deaths, rations for the vulnerable, loss of livelihood payments, and pensions for widows and the bereaved.

Only two days after survivors wrote to officials, Bhopal doctors identified the city’s first novel coronavirus case.



Homemade hand washing station in a water-restricted area ©Biju Nair/Sambhavna

Timeline (continued)

March 23rd: Madhya Pradesh government requisitions Bhopal Memorial Hospital and Research Centre (BMHRC) for care of Covid-19 patients; first gas survivors are discharged

March 24th: With four hours notice the government of India announces 21-day national lockdown

March 24th: Remaining survivor patients discharged from BMHRC

March 25th: First death in Madhya Pradesh (Indore)

March 28th: First patient discharged from BMHRC passes away at Hamida Hospital from untreated pre-existing condition

March 30th: Patient Munni Bee and Rachna Dhingra of the Bhopal Group for Information and Action file a petition on behalf of survivors to re-open BMHRC; Munni Bee remains in BMHRC ICU

April 2nd: Second patient discharged from BMHRC dies from pre-existing condition

April 2nd: Community WhatsApp groups pass 50,000 members in first week

April 6th: Denied entry to BMHRC, survivor Naresh Khatik, 52, becomes the first death to Covid-19 in Bhopal

April 7th: Supreme Court asks the petitioners to approach the Madhya Pradesh High Court

April 8: Petition is filed again. BMHRC uses bouncers to keep ailing gas victims outside

April 9th: Petitioner Munni Bee passes away at BMHRC before her petition is heard

The letter sent by survivors received no official response. Instead, within two days the only super-speciality hospital for gas victims in the city was shut down and designated for the exclusive use of Covid-19 patients. No explanation was given, and no warning. Consequently, seventy-six survivors were evicted from intensive care.

The great majority of the evicted patients were from the city's poorest communities. Some were on ventilators, or undergoing dialysis. One critically ill survivor, Munni Bee, subsequently filed a petition in India's Supreme Court arguing for immediate restoration of the BMHRC hospital, absent of which avoidable deaths were inevitable.

With hospital access denied those most in need of it, the pandemic soon claimed its first victims in Bhopal. Deprived of critical care, two desperately ill gas survivors perished. Suffering hypertension and struggling for breath, survivor Naresh Khatik was denied entry to BMHRC as it had been 'vacated'. He died on the evening of April 6th after a desperate scramble for care forced his family to borrow money for private treatment. Naresh was later confirmed to be the city's first official victim of Covid-19.

In the three weeks before her suit was presented in court, Munni Bee—who had remained on a ventilator in BMHRC—also died. Hours before her posthumous petition was finally heard health officials restored the super-speciality BMHRC hospital to the care of gas survivors.

During the time survivors were barred from using it BMHRC—built by court-request by Union Carbide—did not treat a single coronavirus patient while the city saw five Covid-19 deaths, all of them gas victims. To the families of those who suffered and died, no apology. Such avoidable tragedies, foreseen and forewarned, reinforce the experiences of 36 years.

Repeatedly failed by those with a duty of care, Bhopal survivors learned instead to trust in each other. As this report is being written there are 27,891 cases in the city. 500 are dead, of which at least 56% are gas survivors. More than 80% of those investigated suffered gas-related co-morbidities such as hypertension, lung disorders, kidney dysfunction, and cancer.



A gas survivor meets with doctors at the Chirayu Cancer Hospital ©Judah Passow



Timeline (continued)

April 6th: Sambhavna implements 4-step Community Action Plan to safeguard survivors

April 14th: Prime Minister Modi extends lockdown for two weeks

April 15th: A few hours before the hearing on the petition begins BMHRC re-opens. It is too late for five gas survivors already dead due to Covid-19

April 17th: Bhopal death count reaches 7, all survivors

April 21st: In response to Munni Bee's petition testing of gas survivors for Covid-19 begins at BMHRC

April 23rd: Survivor organisations write a second letter to officials requesting immediate intervention and detailing steps to prevent further survivor deaths

On the day of Bhopal's first Covid-19 death some of the poorest people on earth, lacking adequate protective equipment, testing kits, financial or other resources embarked upon a demanding and dangerous plan of action designed to monitor and suppress the spread of the virus within their own communities.

Absent of guidance or support from authorities, Sambhavna and Chingari staff joined with neighbourhood committees to develop an urgent mutual aid plan. Steps were initiated while only a handful of cases were known across India. Decades of first-hand experience of public health work informed every decision.

By mid-March, design and production of homemade handwashing stations was already underway to provide accessible hygiene within communities with little or no access to clean running water. Essential health information on COVID-19, largely absent from state-run medical centres, was printed and delivered across city wards covering upwards of 100,000 people. Teams formed to deliver medicines, coordinate Whatsapp networks and stimulate the homemade production of personal protective equipment.

Painstaking door-to-door surveys began collecting health information, check-listing co-morbidities and symptoms, and testing temperatures. The teams planned isolation of those displaying symptoms via common facilities arranged within communities, where they could closely monitor contacts. Data was carefully recorded to be fed to local health care systems.

All of this activity depended upon teams led by seven Community Health Workers, ten Community Research Workers, and most importantly of all, over 100 Community Health Volunteers. Their work has since safeguarded tens of thousands of the city's most vulnerable people.

Timeline (continued)

April 28th: Clinic staff and volunteers carry out a door-to-door census to identify vulnerable individuals – those over 60 or with underlying health conditions

April 28th: Bhopal relief efforts by clinic staff and survivors featured in ALNAP report giving advice to humanitarian agencies on responding to Covid-19

April 29th: Bhopal death count stands at 12, of which 10 are gas survivors

April 30th: Madhya Pradesh Government responds to survivor group's request for intervention and holds a series of meetings on courses of action to protect survivors

May 1st: Indian Government announces second two-week lockdown extension

May 4th: Sambhavna updates Action Plan to co-ordinate with local government efforts

May 6th: Madhya Pradesh Government sets up 19 centres for screening of Covid-19 among gas survivors in Bhopal

May 7th: Total confirmed cases in Bhopal climb to 561; total deaths stand at 19, of which 17 are gas survivors

May 12th: Prime Minister Narendra Modi announces a third extension to lockdown with new rules

May 13th: Total cases in India stand at 74,281 with 2,415 deaths; cases in Madhya Pradesh stand at 3,986 with 225 deaths; cases in Bhopal stand at 786 with 33 deaths

Dedication, experience, togetherness, joy

Large numbers of survivors of the 1984 gas disaster and succeeding generations live in colonies bunched around the rusting skeleton of Union Carbide's abandoned factory and its 75 acre grounds. While the factory was in operation Carbide dug crude ditches across sixteen acres of the site, tipping into them thousands of tons of solid and liquid wastes. From these pits poisons continue to seep. Each monsoon flushes the buried toxins down through porous soil into underground pools and channels that are tapped along their course by tubewells from which, for many years, tens of thousands of local people drew their drinking water.

The overcrowded neighbourhoods for which these contaminated wells were once the sole source of water are today rife with sickness. But they are also abundant with care. A two-decade house-to-house program run by Sambhavna's community health team is the inspiration for over 100 local volunteers, each committed to giving their time freely, and working lovingly, in service to their friends and neighbours.

Coordinated by seven Sambhavna health workers, the volunteers undertake training in an extensive range of medical monitoring techniques, gaining the know-how to measure and record height, weight, mid-arm circumference, temperature and blood pressure. They learn how to prepare blood slides for testing of malaria in Sambhavna's pathology lab, and are able to measure haemoglobin and estimate sugar and albumin levels in urine samples. Through instruction and experience they become knowledgeable on anaemia, on seasonal diseases like diarrhea, typhoid, jaundice and measles, also on female health issues, assisting in the early detection of cervical cancer, as well as other diseases.

Supported by two screening centres, the monitoring and intervention program also empowers volunteers to identify ailments common in local areas such as joint pain, fever, coughs and body aches, and prescribe simple remedies to provide relief. Through close coordination with Sambhavna's health workers, the volunteers' efforts have reduced disease transmission to such an extent that in the last five years rates of TB in these communities have dropped by over ten times. Though houses are rarely sealed, and use of nets and insecticides is uncommon, they have helped reduce dengue and malaria in their communities to zero — to no cases, whatsoever.

The volunteers' skillsets — which include health education, community data collection, medical testing and medical interventions — are uncannily relevant to a viral pandemic. As the coronavirus moved toward Bhopal this tightly coordinated network helped distribute 16,000 leaflets in 81 separate localities, explaining dangers, precautions to be taken, and how to recognise, report and monitor symptoms of COVID-19.

A few years ago Raisa Bee, a volunteer in Rajgarh Colony, was asked why she had dedicated so much of her life to this unpaid work. 'The happiness of selfless service is greater than all happiness,' Raisa said. 'In each other we find strength and joy of friendship. Yes, we are poor, but working together we can achieve unimaginable things.'



Ruby Ali
(Annu Nagar)



Sakeena Shah
(Annu Nagar)



Sana Shah
(Annu Nagar)



Saraswati
(Annu Nagar)



Shaheen Bee
(Annu Nagar)



Shahida Bee
(Annu Nagar)



Haseeb Khan
(Blue Moon Colony)



Naseer Khan
(Blue Moon Colony)



Shakeela Bee
(Blue Moon Colony)



Tarannum
(Blue Moon Colony)



Akash Vairagi
(Gareeb Nagar)



Anjali Panthi
(Gareeb Nagar)



Megha Panthi
(Gareeb Nagar)



Monica Vishwakarma
(Gareeb Nagar)



Rahul Kushwaha
(Gareeb Nagar)



Vijeta Rajput
(Gareeb Nagar)



Gauhar Baaji
(Kargill Colony)



Hemant Yadav
(Kargill Colony)



Jitendra Vishwakarma
(Kargill Colony)



Pawan Singh Karan
(Kargill Colony)



Ritik Vishwakarma
(Kargill Colony)



Rohit Thakur
(Kargill Colony)



Nasreen Nawab
(Nawab Colony)



Rizwan Qureshi
(Nawab Colony)



Saafiya Baji
(Nawab Colony)



Salamat Qureshi
(Nawab Colony)



Zameer Khokhar
(Nawab Colony)



Asma Tahir
(New Arif Nagar)



Muzammil
(New Arif Nagar)



Sarfaraz
(New Arif Nagar)

The spirit to help each other



Raisa Bee in Rajgarh Colony, her lifelong home ©Tabish Ali/Bhopal Medical Appeal

Raisa Bee was hurled into community service by Union Carbide's disaster. In the first terrible hours after the gas she joined thousands of others toiling in care of the suffering. Spontaneously assembled teams scoured streets and houses, carrying survivors to hospitals. For three nights blistered hands built pyres, and dug graves. A bus stop became a relief camp, offering free milk, fruit, water and comfort.

Raisa was among those unheralded volunteers. She has been committed to her community's wellbeing ever since. 'I like connecting outsiders who want to help the people who live here,' she says. 'I was born here, got married here, and my children were also born here. I am the oldest one living in this community. Everyone here knows me.'

A devotion to voluntary work needs encouragement and understanding, Raisa believes. 'My family and husband have been very supportive,' she says. 'My husband was an auto rickshaw driver and got highly exposed that night. For years he suffered great difficulty breathing, also lack of appetite, stiffness in his joints and problems with his urine tract. Due to all this illness for eight months he was completely bed ridden. His name was Mohammed Shafiq. He passed away seventeen years ago.'

By the time Mohammed succumbed to his injuries authorities had long-since stopped recognising gas-related deaths, leaving Raisa ineligible for a meagre Rs. 1,000 (£10.50) per month gas widow's pension (a scheme anyway suspended, at time of writing, since 2019). A survivor herself, Raisa also suffers poor health. She has to endure pain and stiffness in her knees, and high blood pressure due to hypertension — something that now also puts her at greatly higher risk from the coronavirus. 'Sambhavna has given me a lot of treatment for the pain in my legs, through Panchkarma and other medicines, and they have also referred me to other hospitals for specialist care.' Unable to afford private care, were it not for Sambhavna Raisa would have struggled to obtain medical help.

Few survivors of Carbide's gas can remember a time before illness, discomfort and disability became their daily companions. Raisa's memories must stretch back even further. Sometime before the gas she suffered an agonisingly painful bite from a *baraiya* (a kind of wasp) which caused the loss of her left eye. Yet not this, the traumas of that night, nor the poverty, sickness and despair left as a legacy to her city have lessened Raisa's faith in justice, or in the goodness of others. (Continued on page 14)



Shahrukh Khan
(New Arif Nagar)



Nandraj
(Odiya Basti)



Sunil Kumar
(Odiya Basti)



Triveni Sunani
(Odiya Basti)



Veeru Bhatt
(Odiya Basti)



Anjali Vishwakarma
(Preet Nagar)



Neha
(Preet Nagar)



Nikita
(Preet Nagar)



Shubham Vishwakarma
(Preet Nagar)



Varsha
(Preet Nagar)



Chanda Khan
(Rajgarh Colony)



Iram Khan
(Rajgarh Colony)



Jainab Khan
(Rajgarh Colony)



Lucky Jatav
(Rajgarh Colony)



Raisa Bee
(Rajgarh Colony)



Chandni Ahirwar
(Sundar Nagar Lal Tanki)



Kajal Prajapati
(Sundar Nagar Lal Tanki)



Naveen Vishwakarma
(Sundar Nagar Lal Tanki)



Sheetal Ahirwar
(Sundar Nagar Lal Tanki)



Yogesh Mali
(Sundar Nagar Lal Tanki)



Anita
(Shankar Nagar)



Durga
(Shankar Nagar)



Paramjit
(Shankar Nagar)



Rani Ahirwar
(Shankar Nagar)



Shivani Sen
(Shankar Nagar)



Anil Thakur
(Shivshakti Nagar)



Avadhesh Shukla
(Shivshakti Nagar)



Hemant Sahu
(Shivshakti Nagar)



Manoj Rathore
(Shivshakti Nagar)



Prakash Ojha
(Shivshakti Nagar)

(Continued from page 12) And so despite her poor health Raisa joined demonstrations in Delhi that forced erstwhile PM Manmohan Singh to promise an Empowered Commission on Bhopal. The PM's capitulation came only after a 500-mile foot march, street protests at which women & children were beaten and jailed, and a fast-unto-death involving dozens of gas survivors. The announcement of the Commission sparked euphoric scenes at the pavement-camp that for months was the survivors' Delhi home, with revellers of all ages embracing, singing, crying with joy and dancing ecstatically. The promised Commission would ensure appropriate medical care and monitoring alongside other desperately needed economic, environmental and legal initiatives.



Celebrations in Delhi crossing generations (2008)

A dozen years on and, as with so many others, Dr Manmohan Singh's solemn official promise lies broken and forgotten. So it is Raisa and her fellow community leaders who continue to carry the duty of care. It is a duty that Raisa — tiny in stature but vast of heart — rises to every day. 'I wake up during *fajr* (sunrise) and do my *Fajr Namaz* (prayer). At 7am I do *Ishraq Namaz*, and after this I am ready for the fate the day holds. This is one of my good habits. Nowadays, I don't need to do any work at home. If people in my community have a problem, like if anyone's child is not well, or any other issue, then they come to me and I help them in whichever way is possible for me,' she says. 'Elsewise I spend time with my family, especially my great-grandchildren, Shifa and Shifan.'



Raisa Bee in Rajgarh Colony, July 2020 ©Tabish Ali

Speaking of time spent with family takes Raisa into reminiscences. 'When Mohammed and me were young we'd often go to Bhopal Talkies to see films with our children. We'd drive in Mohammed's auto rickshaw to the 9pm - 12pm shows. Tickets cost just over a Rupee (little more than a penny). After, we'd visit a street vendor near the bus stand who sold a sweet dish that looked like an egg, which we just loved to eat. All the while Mohammed would be asking me what I'd learned from the film. I remember *Pratighat* (Backlash). I told him that the film showed how some people try to cheat you at every turn but also how a woman could stand against injustice. Mohammed was very fond of cricket, sometimes watching it all night on a black and white television he'd saved for. I don't like cricket, it upset me that he spent so much time on it. It's 17 years since he passed away. Now I wouldn't even mind the cricket if he could still be here.'

'I don't get any money, any kind of salary for this work,' says Raisa. 'Most important of all is the spirit to help each other. I carry this spirit, because of which I'm connected with everyone in the community. People here respect me and follow my advice. And I like helping people. If there is a quarrel, the parties listen to me and stop fighting. If due to my help someone feels relief from difficulty, this is the best reward there is.'



Deepak Lohmare
(Shriram Nagar)



Gayatri Chaurey
(Shriram Nagar)



Kapil Shakya
(Shriram Nagar)



Omprakash Chaurey
(Shriram Nagar)



Akeela Bee
(Subhash Nagar)



Ashok Pathrol
(Subhash Nagar)



Imran Ali
(Subhash Nagar)



Omprakash
(Subhash Nagar)



Shahrukh Khan
(Subhash Nagar)



Waseem Khan
(Subhash Nagar)



Devendra Ahirwar
(Sundar Nagar)



Jatin Thakur
(Sundar Nagar)



Pradeep Ahirwar
(Sundar Nagar)



Shubham Rawat
(Sundar Nagar)

If others are wrong be patient, be kind

Like many who live in New Arif Nagar, Shahrukh, 22, manages two jobs to make ends meet. But when not doing construction work, or driving a taxi, Sharukh has also been striving to support his community's most vulnerable.

'Bushra Appi (a Sambhavna Community Health Worker) comes regularly to our neighbourhood,' Shahrukh says. 'When me and others began to understand the importance of what she was doing we began helping her and the other health workers. Appi ('elder sister') asked me to find out about problems people face in this community. For example, during lockdown some families were finding it difficult to feed themselves. We made arrangements for them.'

Along with time and effort the pandemic has demanded a variety of skills from volunteers like Shahrukh. 'Whatever work Appi asks me to do, I get it done,' says he. 'I helped her put up posters and distribute pamphlets to make people aware of how to protect themselves from the virus. I also helped fill in the survey forms, as much as I could. My family helped fill 150-200 of them. Apart from this, I distributed supplies throughout lockdown - we also passed food onto passing trains to feed hungry travellers (migrant labourers).'



Sharukh Khan in New Arif Nagar ©Tabish Ali

‘I have done all kinds of work,’ Shahrukh says. ‘For instance, drainage lines get choked here causing unhygienic conditions, so I help with that, too.’

Shahrukh’s neighbour and fellow volunteer Rizwana, 38, looks after the small local store. ‘I meet with people in the community, talk with them, collect information and pass it to Sambhavna’s people,’ she says.

Rizwana’s involvement began when she received treatment at Sambhavna two years ago. There she got talking with members of the Community Health team. ‘They told me that we could work together. Initially I went door to door to find out about problems people here have and to arrange help for them. There are many health issues that women are hesitant to share. I talk with them, let them know that their problem can be treated and inform them about Sambhavna. Often people were going to quacks instead. I explain that they are not qualified doctors and that they’ll receive authentic treatment at Sambhavna.’

Rizwana’s community was thrown into acute crisis by the pandemic. ‘People faced so many difficulties. They couldn’t get medicines or treatment, families lacked food stocks, people who survive on daily wages from labouring went unemployed for 3-4 months. For such people even if they lose work for just a single day it’s difficult to support their family. With the help of Sambhavna staff I was able to arrange basic food for them.’

With a lack of public information, the volunteers have been key to spreading clear advice, and to monitoring local health. ‘I distributed pamphlets,’ says Rizwana, ‘and got other people involved so we could form a chain and make sure the information reached every house. I also helped with filling in survey forms. I am not able to read and write, but I got the forms filled with the help of my son, Muzammil. I passed him information and he wrote it down. In this way we filled about fifty forms.’ Still studying in

secondary school, Muzammil combines volunteering with part-time work in the local vegetable market, for which he earns Rs. 100 (£1.05) per day.

Like Muzammil, volunteer Yousuf began work in his community when still at school. ‘Nasir Bhai, Masarrat Appi & Mukesh Bhai (all members of Sambhavna’s Community Health team) were working in our community. Then my mother assisted in setting up the Sambhavna Community Health Unit. She has helped in various projects and so I got involved, too. At that time water contamination was a big issue in this area. Drinking groundwater here is now banned.’

Yousuf also works in a local vegetable *mandi* (market) as a *hammali* (load carrier), the earnings from which (£3-4 per day) drew him out of college. Since the pandemic he has often had to leave early, or set off later for work in order that he can volunteer across the communities of Nawab Colony and Annu Nagar. In these areas Yousuf helped fill 50 survey forms and



Rizwana at her store in New Arif Nagar



Shahrukh pastes a poster onto a water tank ©Biju Nair



Yousuf at his home in Nawab Colony

Rizwana ran into similar anxieties. ‘Before counselling others, my husband and me got tested. Many people were afraid that they’d be locked in hospital for 14 days and that their homes would be sealed. They’d say “if you like getting tested then go and get yourself tested but don’t ask us to do it!” or “because of you our whole community will get sealed up!” So I explained that these were misunderstandings, that no such thing will happen. How, on the other hand, as everyone here is in one way or another in contact with each other, if just one person is infected and doesn’t get detected they will spread the virus across the whole neighbourhood. If you are infected you should not spread it to others. After seeing different videos people were also scared that instruments will be inserted into their nose, and different body parts. I reassure them that the actual testing process is very different from these videos. Many were then afraid of consulting doctors, especially if suffering from a cold and cough. I told them it’s not mandatory that this will be due to corona. After hearing my explanations about twenty people got themselves tested and all were found negative. Thanks to the strong awareness in our area now we have not had to face the problems others have.’

At times underlying fears have provoked hostility, even against the volunteers. ‘People have said things like, “Don’t you have any other work?”,’ explains Yousuf. ‘As they are elder to me I don’t mind their words much. And if I started minding I’d not be able to work in the community to help them understand. We need to have the patience to listen to others, even if what they are saying is wrong. We need to help them understand facts in a kind, polite way - not by getting into an argument, or even a fight with them.’

Yousuf’s approach is echoed by other volunteers. ‘Everyone in the community knows me so no one will refuse to hear what I have to say, starting from the corner of the bridge to that tower,’ says Shahrukh. ‘If we visit someone’s house they will offer us a chair to sit. But it also depends on your own behavior. If you treat people well you will be welcomed at their houses. They will offer you tea and snacks. On the other hand if your behavior is impolite, no one will welcome you.’

also involved relatives, such as his niece, in the work. ‘I feel really nice that we are able to do something for our neighbours,’ he says. ‘Not many in the community are educated; they aren’t always able to understand things like filling the survey forms. Then we need to help them understand, to counsel them.’

Volunteers also help persuade neighbours to abide by the taxing protocols needed to control the virus. Invaluable to this is the bond of trust between them and the community they serve. ‘If an outsider comes here without our help it’s difficult for them to get heard,’ says Yousuf. ‘People in this community fear a lot. Some thought that if they went to get tested they’d receive an injection that can kill. So to calm fears we showed videos of other local people being tested. I got myself tested, Ganga Auntie got tested, Shamim Bhai, too, and my elder brother and others. Then people saw there wasn’t anything to worry about.’



Nousheen (Chingari) helps distribute food ©Biju Nair



Sambhavna deliver medicine in lockdown ©Biju Nair

‘The most important thing of all,’ Rizwana says, ‘is to have proper health information, but also to know how to communicate it most effectively. Information alone isn’t enough. We need to speak and listen to people in the community with care and attention, with politeness and patience, and though at times people won’t respond well — will begin bitter arguments, and even get ready to fight — above all, we need to communicate with love.’

A lot of people here are not educated much,’ Yousuf adds, ‘the conditions are not very hygienic, for years we were dependent on water contaminated with chemicals (until Supreme Court orders finally brought cleaner supplies). By associating with Sambhavna we benefit from the knowledge of educated people. I have learned to measure height, blood pressure, how to counsel patients and the general use of medicines. I am happy that Sambhavna has given me the chance to learn good skills, from good people. Now, for the betterment of my own community, I am able myself to do good things.’

‘People here have learned through experience to trust the Sambhavna Community Health Workers,’ says Shahrukh, ‘even when they ask difficult things of us. After seeing videos on their mobile phones of people wearing polythene (PPE kit) people were afraid of getting tested. I was also afraid. When Bushra Appi and others tried to persuade me I found ways to delay as much as possible.

I thought, “they will make me wear polythene and, if not of Corona, I will die of the summer heat in that suit!” That was the confusion - we thought common people would be kept in PPE kit for days. But then Bushra Appi clarified the error and I finally got myself tested. And once I was tested others agreed, too. All because of trust.’

‘Sir,’ Rizwana replies, when asked why she became a volunteer, ‘I can’t see people in pain. I will leave all my work and try to help them. From the beginning I’ve had this attitude. If there is anything in my house someone needs, I will give it to him or her. I don’t want to benefit from others, I want to benefit them. If someone is in trouble and with my help their problem can be resolved, I must give it. Even if Sambhavna had not been here I would have worked for my community. I have the spirit to help others in my heart.’



A magnificent seven - Sambhavna Community Health Workers take shade from the heat during their rounds ©Biju Nair

Don’t be afraid

Above the engine noise of refuse collection vans a woman’s voice soars. The coronavirus may seem terrifying, the voice reassures, but if we listen it’s easy to deal with. We don’t need to be afraid.

Municipal workers played the song, which is written and sung by Madhav, a former Sambhavna researcher, from their cabs as they moved around Bhopal. It’s one of many creative ways Bhopalis have soothed and persuaded their friends and neighbours to respect the virus, and to protect against it.

At the onset of the pandemic fear was the first contagion, closely followed by confusion. In order to suppress the spread of infection, Sambhavna’s health workers called a series of meetings with teams of local volunteers to agree upon a plan to spread awareness. An early step was the setting up of WhatsApp groups as information and advice centres to report symptoms, or seek help. The groups are rigorously policed to exclude the inevitable flood of jokes, self-serving quacks and crackpot cures.

Door-to-door surveys by volunteers enabled health teams to quickly identify those most at-risk due to hypertension, diabetes, pregnancy, lung and kidney damage, and other relevant conditions, and to put in place measures to protect them. A house-to-house screening program uses affordable tools such as pulse oximeters to test oxygen levels, heat sensors and thermometers to track temperatures, and kits to measure blood pressure. Arrangements are made to isolate cases locally, and get tests done at hospitals. As the hospitals had stopped treating other illnesses, medicines were home-delivered to those in need.

An unmissable 6 x 8 ft banner displays key health messages. Using photos of the most active local health volunteers to familiarise and reassure, each banner is customised for each community. Perhaps seeing themselves hoisted high, watching over their neighbours, makes the volunteers feel a little heroic, too. After all, that’s just what they are.

A song for all

WE CAN DEAL WITH IT

The coronanavirus seems so scary
but we’ll make it seem ordinary

Dry cough, cold, fever, pulses racing
breathless, scared of what you’re facing

With signs like these get yourself tested
thus the risk may be arrested

Your eyes, nose, mouth you mustn’t
touch
but cannot soap your hands too much

If you always wear a mask
beating corona’s an easier task

If you see someone who’s not okay
take care, but please be sure to say

That to hospital they must go
and you’ll make sure that they do so

While this disease spreads every way
in our houses we must stay

Stay three yards from one another
and you’ll be safe and free from bother

Brother, sister, volunteers
your loving work calms people’s fears

Keep good watch over our friends
you’ll see how quick this crisis ends



Volunteers & CHWs in front of an educational banner. Particular to each neighbourhood, they carry personalised images of team members ©Biju Nair

Local understanding works

Days after Bhopal survivors began their work on COVID-19, 50 leading UK scientists urged Ministers that to suppress transmission of the virus they needed to utilise an army of volunteers, operating within local teams and coordinated through local action plans. The call mirrors the approach taken in Bhopal, detailed in the appendices of this booklet, beginning on page 22.

The volunteer army had already mobilised. Across the UK by mid-March tens of thousands had joined more than 720 local mutual aid groups to support those needing to self-isolate. As in Bhopal, volunteers came forward to help deliver food, collect medicines and spread awareness via leafleting and posters. 'People have a very grounded sense of community and its importance', said Kevin Smith, an organiser in Lewisham. 'Individual wellbeing is dependent on collective wellbeing and common resilience.'

By April a network of key international humanitarian organisations and experts (ALNAP) had published an early report — informed by interviews with Bhopal health workers, among others — whose recommendations concluded that, 'Pressures on international and national capacities mean that a community-led action, facilitated and enabled by local actors, will be the mainstay of the COVID-19 humanitarian response — from planning to detection to prevention, and eventually case management.' ('Responding to Covid-19: Guidance for Humanitarian Agencies', ALNAP, April 28).

Clamour has continued to grow for government support of local mobilisations and partnerships in the UK and elsewhere. 'You need the shoe-leather epidemiology, you need people on phones. Apps are simply supports for contact tracing,' said Allyson Pollock, a professor of public health at Newcastle University. 'You need people on old-fashioned things like telephones or going door to door and they need to be local teams because they need to understand the local communities.' (Guardian, April 28)

According to a group of independent UK scientists, 'Communities and civil society organisations should have a voice, be informed, engaged and participatory in the exit from lockdown. This pandemic starts and ends within communities.... There is an urgent need for government to demonstrate such active participation from communities from around the country.' (Independent Sage report, May 12)

In Bhopal, local authorities were now acting. On May 3rd, six weeks after survivor organisations first raised the alarm, officials agreed to support their initiatives alongside a mass program of monitoring, testing and treatment. Every part of the survivors second action plan, contained in the appendices, was accepted and agreed.



Sambhavna community workers build model handwashing stations for local education ©Biju Nair

What we have learned in Bhopal



A Sambhavna health worker uses a pulse oximeter to check oxygen levels, part of ongoing local screening work ©Biju Nair



Our program to stem the spread of the novel coronavirus in Bhopal is common sense based on best practice. But it is meticulously organised and there is magic in it. The magic is the people, the bond of trust between the volunteers and the people of the community they serve.

Our approach emerges from experiences and relationships built up over more than two decades of primary care work in communities coping with the unrelenting medical, social, economic and environmental impacts of an industrial disaster without parallel. Oftentimes hope, justice and even life have seemed out of reach, but at no time have the survivors of Carbide's crimes in Bhopal been unable to depend upon each other, or the thousands of ordinary people whose unerring support enables the clinics' work.

The pandemic uncovers important facts about the nature of those crimes, and exposes three and half decades of studied neglect. Of 574,375 officially recognised victims of Carbide's gases, 93 percent are classified as 'temporarily' injured, and on this basis were awarded just £380 each. Recent official data exposes the unforgiveable falsehood of 'temporary' injury and confirms worst fears. Though making up only 17% of the district's population of 2.8 million, of the COVID-19 deaths recorded in Bhopal so far 56% have been gas survivors, who are suffering a rate of mortality six-and-a-half times above those who are not gas exposed.

A petition pending for ten years before India's Supreme Court seeks to 'cure' the unjust compensation Carbide paid to settle civil claims for Bhopal. Both Carbide and its owner Dow Chemical — for whom a spokesperson once termed \$500 'plenty good enough' — refuse to pay another cent, or to attend homicide proceedings from which Carbide is a declared 'fugitive'.

While criminal neglect continues to take lives in Bhopal, decency and kindness is saving them. Over 8 months, the city's COVID-19 rate of infection has been one-in-a-hundred. Where our Community Shield is still hard at work, the rate is less than one-in-a-thousand, & 80 more volunteers recently joined us.

| Union Carbide Still Kills | |
|---|-------|
| Bhopal Pandemic Score | |
| AGENCY | DEATH |
|  | 74 |
|  | 180 |

Timeline of a single tragedy

June 1st: Following 15 days of fever and discomfort gas survivor Shahin experiences heart pain and breathlessness.

June 2nd: At 5pm Shahin is refused admission by Guru Ashish hospital. She is taken to BMHRC at 6.30pm. The hospital demands extensive paperwork and a payment of Rs. 200 before performing an x-ray, but no ECG test or specific treatment. Suspecting a minor heart attack, her carers rush Shahin to Hamidia hospital. She is admitted to a ward for suspected coronavirus cases, is given oxygen and tested for Covid-19. Able to talk, Shahin asks to be taken home.

June 3rd: At 5pm Shahin's family learn she has tested positive. She is moved to the Covid ward. Shahin tells her mother there is no doctor on the ward and no water. The next day she reports that no food or water is available.

June 5th: A doctor instructs Shahin's son not to call again as her mask was being taken away. Shahin dies at 9.30pm.

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The evolution of a plan

People & Planning

The virus burst onto the scene rather in the manner of the Spanish Inquisition in a Monty Python sketch.

‘No one expects the novel coronavirus!’

We in Bhopal were as surprised as anyone else, but we had a unique reason for alarm, and for immediately starting to plan for a possible epidemic. The reason was the large population of gas-survivors and victims of contaminated water that our clinics were opened to serve.

Preparing for the worst

There was little to no time, not much was known about the novel coronavirus, except that it was a close relative of SARS, therefore likely to be both highly infectious and dangerous. What we did know for sure was that our people would be more vulnerable than most. (We weren't wrong.)

On January 30th came news that the virus was in India. By March 2nd it was closing in on us. India's first COVID victim died on the 12th.

In mid-March we began trialling a four-part plan to defend 21 vulnerable communities against the virus and started pre-emptive work to slow it down when, inevitably, it arrived.

Given the risk to damaged children, on March 16th Chingari closed the doors of its Rehabilitation Centre. Its staff joined an emergency meeting at Sambhavna to agree a plan of community action.

On 18th Sambhavna's community teams set about installing hand-washing stations in areas without piped water.

Our volunteer network mobilised and distributed throughout the city information leaflets describing COVID-19's risks, dangers, precautions to be taken, and how to recognise, report and monitor symptoms.

On the 21st we opened WhatsApp groups as online information and advice centres.



Thousands signed up. The groups are carefully policed to exclude self-serving quacks and crackpot cures and the inevitable flood of jokes.

They are a hydroxychloroquine-free zone.

A change of plan

Our plan launched on April 2nd. (Appendix A following.) There had been no infections and no deaths in any of our communities.

The plan ran in 21 areas for a week and a half before we realised that we had been too ambitious. It was necessary to concentrate on areas where we could deliver a first class service.

The revised plan, published here in full, had five parts, and after talks with the neighbourhood committees we chose 15 areas.

Each was home to numbers of volunteers who had worked with us for at least five years.

(Map and detailed information about the volunteers and their works follows.)

A constant evolution

As you'll see from the descriptions and data, in these pages, we collect a lot of information and constantly assess how we are doing.

If something needs changing, it is changed.

Staff and volunteers are constantly coming up with new ideas.

They designed our handwashing stations. It's not glamorous, just plastic containers hung from pole frames, but easy for people to use and refill. You step on a pedal which pulls a string and tilts the container till it pours.

The song on page 13 was composed by a former staff member. The health workers and volunteers got dustcart drivers to play it as they go around the streets. There is so much ingenuity, and fun, even, in working together and for each other.

Action Plan for Protection from and Caring of COVID-19 in 15 Communities (Population. 42,000) where Sambhavna's Community Health Workers are Active (April 2-13, 2020)

This Action Plan is in five parts.

1. Effective communication for raising awareness.
2. Door to door survey for identifying persons with symptoms indicative of COVID-19.
3. Quarantine of persons with symptoms of COVID-19.
4. Care of quarantined persons with COVID-19.
5. Referral for treatment of serious patients and testing for COVID 19.

1. Effective communication for raising awareness.

1.1. To ensure that the information leaflet published by Sambhavna and Chingari reaches each family in different communities and to organize reading out the leaflet for those with no literacy. A large part of this work will be carried out by children, particularly those who assist the Community Health Workers (CHW).

1.2. To make WhatsApp groups of all families in the community (one member from each family) and post selected and most relevant information.

1.3. To make one hand washing contraption for every four families in the community. (In places where there is no water supply)

1.4. To get families in the community to make paper masks.

Most of the above work will be carried out by upwards of 50 Community Health Volunteers (CHV) (many of who have been working with the Community Health Workers (CHW) for the last 5 years) with support and guidance of 7 CHWs from Sambhavna.

CHVs are expected to recruit at least 5 new Health Volunteers from among the people they work with.

Other staff of Sambhavna (such as 10 Community Research Workers - CRW) and Chingari will join the CHWs in this work. Coordination of the work will be carried out through three field centres.

2. Door to door survey for identifying persons with symptoms indicative of COVID-19. (Cough, pain in throat, fever and others)

2.1. Collect information on health complaints (including mental health) of every member of every family in the community through door-to-door visits and through phone calls. Administer the Checklist (by NCDC) to score persons with complaints related to COVID 19.

Include the absence of smell and taste (if only on grounds of familiarity) a condition reported by large numbers following toxic exposure in December 1984.

This would be done twice in a week.



2.2. Measure temperature of every person complaining of fever. CHVs will counsel them to stay apart and ask them to seek support of CHVs in charge of isolation. This will happen on the same day.

2.3. To tally up scores from the check-list and identify those in need of isolation and organize their counselling and isolation. This will also happen on the same day.

2.4. To follow-up on vulnerable members of the community including children, pregnant women, persons above 60 and those with respiratory, cardiovascular, renal problems or who are diabetic, every other day.

3. Quarantine of persons with symptoms of COVID-19 (dry cough, fever etc.).

3.1. In houses with 2 or more than 2 rooms, ensure that one room is prepared in advance for isolating a person or persons identified with symptoms of COVID-19.

3.2. Arrange for common isolation facility (a large tent set up in open area a little away from the community) for persons identified with symptom of COVID-19.

3.3. Arrange for safety of volunteers and family members looking after persons isolated at home and those in common isolation facility.

3.4. Arrange food and water for those in common isolation facility and volunteers and family members taking care of them.

4. Care of persons with COVID-19.

4.1. To send information on name, age, sex, history of symptoms and their severity to the Health Care System set up by the government and arrange for their testing and treatment through the government health care system.

4.2. Arrange for consultation with volunteer doctors (through video conferencing) regarding treatment of persons identified with symptoms of COVID-19.

5. Referral for treatment of serious patients and testing for COVID 19.

5.1. To arrange for transport and hospitalization of serious patients who were under treatment in quarantine. To arrange for oxygen where needed and indicated by pulse oximeter.

5.2. To arrange for PPE for safety of any person (family member or volunteer) accompanying patient to the hospital.



Names of the Communities where the Sambhavna Action Plan will be implemented

| | | |
|--------------------|----------------------------|---------------------|
| 1 New Arif Nagar | 6 Odiya Basti | 11 Preet Nagar |
| 2 Blue Moon Colony | 7 Sundar Nagar | 12 Shivshakti Nagar |
| 3 Nawab Colony | 8 Sundar Nagar (Lal Tanki) | 13 Shreeram Nagar |
| 4 Ganesh Naga | 9 Shankar Nagar | 14 Annu Nagar |
| 5 Rajgarh Colony | 10 Kargill Colony | 15 Subhash Nagar |

Action Plan for a Community Based Response to COVID 19 in the population severely and moderately affected by the Union Carbide disaster in Bhopal.

Sambhavna, Chingari and community organisers met with the Madhya Pradesh Health Commissioner on April 30. At a subsequent meeting on May 4, the Additional Collector requested preparation of a thorough plan focusing on protection and treatment of the city's most vulnerable communities. The following plan is for the 7 municipal wards that were severely and moderately gas-affected. Health officials agreed to implement the entire plan.

A. The following are the Objectives of this Action Plan

1. To reduce deaths caused by COVID-19
2. To reduce load on hospitals
3. To slow down spread of infection

B. The following are the Aims of this Action Plan:

1. Increase awareness regarding protection from and care of COVID-19 patients
2. Provide facilities for implementing of protection measures
3. Provide screening and testing facilities to persons in high risk category*
4. Provide medical care, food and other immediate needs of persons in high risk
5. Provide facilities for home & community quarantine

C. The following activities are proposed under this Action Plan

1. Effective communication for raising awareness and allaying apprehensions.

1.1. To reach all parts of the city with an information leaflet in Hindi and Urdu stating the following

- a. The District Admin and State Government is aware of the increased vulnerability of Bhopal Gas Victims and is making special efforts to provide assistance towards protection and care.
- b. The authorities have earmarked the 50 bed PMC centre as a exclusive centre for medical attention to gas victims with COVID-19.
- c. That authorities have decided to provide special assistance to begin with in the severely and moderately affected populations.
- d. The special assistance will be provided through help centres set up close to the affected localities, 3 in each ward.
- e. The authorities are carrying out this plan with help of NGOs and they welcome the voluntary participation of the members of the local community.
- f. The authorities assure the community that no one will be tested or moved from their homes without their informed consent.
- g. Special efforts have been made to record & redress public grievances in this regard and a special helpline is created.

1.2 To use social media and local TV channels to communicate the following messages:

- a. That it is possible to face the Novel Coronavirus with proper information and thoughtful response.
- b. Participation of all is key to the wellbeing of one.
- c. Protection from the spread of Coronavirus is within everyone's reach.
- d. One needs to be beware of false information particularly with regard to protection from and treatment of COVID-19 particularly those on WhatsApp.
- e. That there are several opportunities for young people and others to volunteer in facing the challenge of the Pandemic.

2. Prompt and focused help through 21 Help Centres in 7 Municipal Wards (1984) identified as severely and moderately affected by the December 1984 Union Carbide disaster.

2.1 Provide medical care to those with diagnosis of DM, HTN, Dialysis, Cancer, COPD & TB in the community. These persons would be identified from records provided by, to begin with Sambhavna Trust Clinic & BMHRC, NIREH & state run gas relief hospitals as they are made available on priority.

2.2 Provide screening through measurement of temperature with thermal scanner and oxygen level in blood through pulse oximeter for those in need of testing and or special care.

2.3 Provide facilities in the community through mobile teams for sample collections from persons in different risk categories.

2.4 Provide support to persons who need quarantining in their homes and if that is not possible in community based quarantine facilities.

2.5 Provide food to those in need.

2.6 Provide assistance to persons needing special attention such as pregnant women in their last trimester or people with disabilities.

2.7 Provide transport and referral facilities for prompt medical care.

2.8 Ensure safety and wellbeing of all persons involved in COVID-19 response.

3. Quarantining of persons with symptoms of COVID-19.

3.1 Persons will be quarantined within the community based on the work of Point 2.2 above either in their homes (where possible) or in quarantine facilities set up near the community.

3.2 It is advisable that tents are set up on open grounds with adequate protection from the elements and provision of food, drinking water & primary care at these facilities.

3.3 Arrangements must be made for PPE of all personnel including volunteers working in the community quarantine facilities.

4. Treatment and care of persons with COVID-19.

4.1 To the extent possible common complaints such as cough, dry or productive, fever, loose motions, pain in throat, headache and others could be treated with appropriate symptomatic and supportive medicines.

4.2 It must be ensured that systems are put in place for no delay in communication in cases of aggravation of symptoms despite treatment.

4.3 Basic facilities for providing oxygen should be available at the community quarantine facilities.

4.4 There must be facilities for safe and quick transportation to appropriate facility for prompt treatment.



D. Persons in different risk categories.

| Risk Category | Age | History of gas exposure | Co-morbidity |
|---------------|-----------|-------------------------|--|
| Highest | >60 years | Yes | Hypertension, dialysis, cancer, COPD, and other respiratory diseases, diabetes mellitus, cardiac & kidney ailments |
| High | <60 years | Yes | Hypertension, dialysis, cancer, COPD, and other respiratory diseases, diabetes mellitus, cardiac & kidney ailments |
| High | >60 years | Yes | None |
| Moderate | >60 years | No | Hypertension, dialysis, cancer, COPD, and other respiratory diseases, diabetes mellitus, cardiac & kidney ailments |
| Above average | >60 years | No | None |
| Above average | >60 years | No | Hypertension, dialysis, cancer, COPD, and other respiratory diseases, diabetes mellitus, cardiac & kidney ailments |

E. Special Help Centres (Vishesh Sahayata Kendra).

It is proposed that the different activities listed from 2.1 to 2.8 are carried out through 3 Special Help Centres (Vishesh Sahaayataa Kendra) each for the Municipal Wards categorized as severely and moderately affected by the ICMR (Indian Council of Medical Research) in 1984.

Each Special Help Centre (SHC) will have 7 teams with 10 team members in all. 2 of the 10 members in each team would be from NGOs. It would be good to induct two members from the locality into the team.

Members of the team could be drawn from BMHRC-, BGTRRD-run healthcare centres, NIREH and others.

The physical location of SHC should be so distributed that people in different areas have equal access. The demarcation of population under a specific SHC has to be very clear.

| Name of Team | Team composition | Work responsibility |
|---------------------------|-------------------------------------|---------------------|
| Medical Care | 1 doctor, 1 paramedic & 1 assistant | 2.1 |
| Screening Team | 2 paramedics | 2.2 |
| Sample Collection Team | As per government norm | 2.3 |
| Quarantine Team | 2 Field workers | 2.4 |
| Food & Special Assistance | 1 Field worker | 2.5 & 2.6 |
| Transport & Referral | 1 Field worker | 2.7 |
| Safety & Wellbeing Team | 1 Field worker | 2.8 |

F. Resources.

1. Information on the most vulnerable person to be made available from Sambhavna Trust Clinic & BMHRC, NIREH & state run gas relief hospitals at the earliest.
2. Software for entering data in android devices and facility for real time response before the end of day.
3. This Action Plan to be executed in 7 wards (2 severely affected & 5 moderately affected). A total of 3 help desk/ward and each help desk will have a team of 10 members. A total of 210 personnel are needed to carry out this action plan. 21 doctors, 21 paramedic & 126 field workers. Sambhavna will provide 4 paramedics & 30 field workers.
4. Equipment needed – Thermal Scanners: 21, Pulse Oximeters: 21, Glucometers: 21, BP instruments: 21, PPE (Personal Protection Equipment) for all health workers.
5. Arrangements for ambulances for transport of vulnerable patients to COVID-19 centres or for their chronic care.
6. Arrangement for food donors & tent associations for tents & beds needed for community based quarantine facilities.
7. Medical consultation from voluntary doctors through video conferencing.

G. NGO's offer to provide.

1. Qualified and trained human power.
2. Contact with medical & other professionals.
3. List of several thousands residents of the severely & moderately affected wards with specific comorbidities.
4. Training & Research Support.
5. Designing online & offline formats and database support.
6. Developing social media content.



The Union Carbide factory and surrounding neighbourhoods

The triangular piece of ground in the centre of the map is the Union Carbide pesticide plant from which deadly gases began leaking shortly after midnight on 2nd-3rd December 1984.

It was bitterly cold that night in the city and those who were obliged to be out late stood around braziers, warming chilled hands. There was no warning.

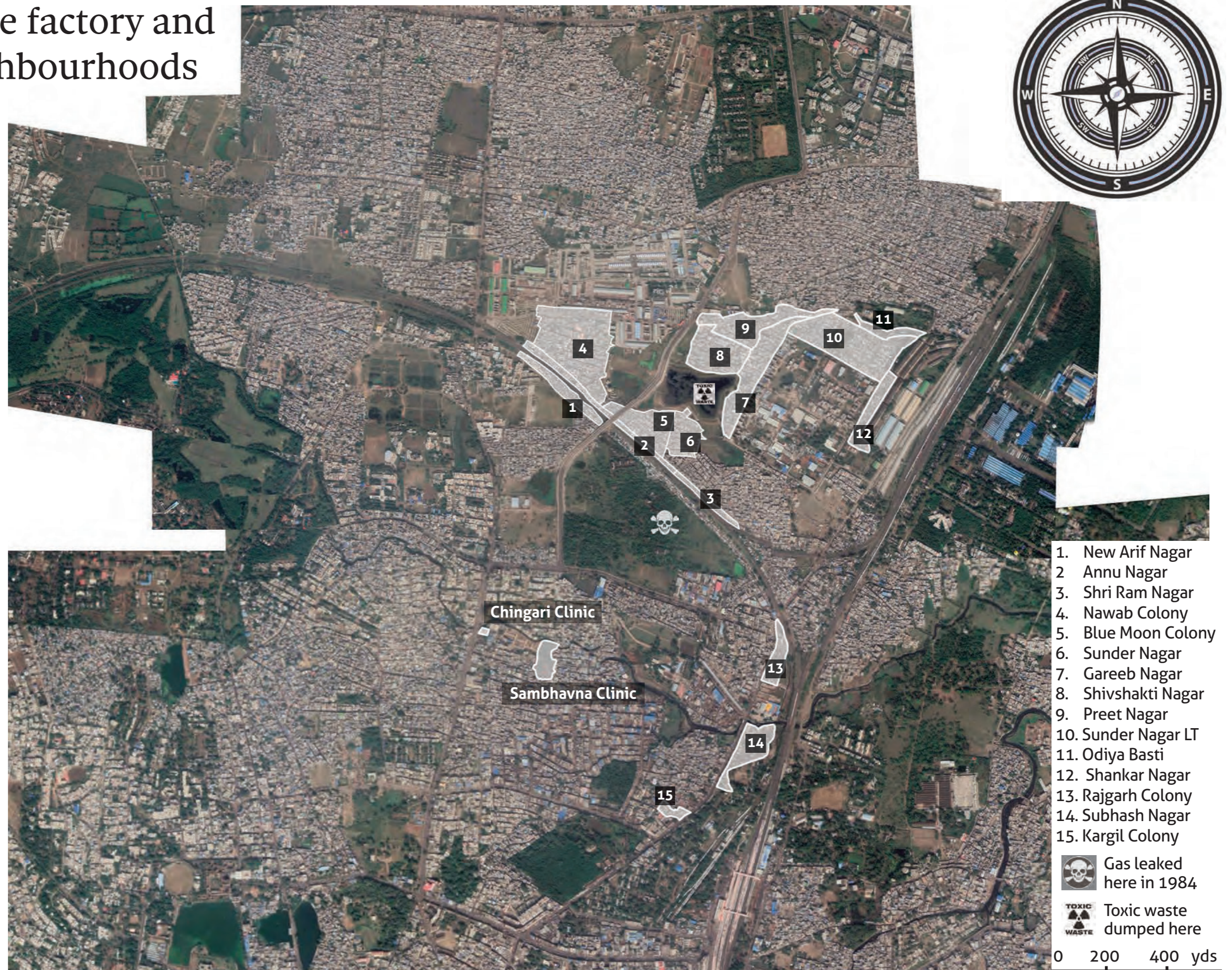
A wind from the north rolled clouds of gas over the neighbourhoods south of the plant, killing thousands, injuring more than half a million, condemning many to a life of wrecked lungs, liver and kidney damage, immune disorders and cancers.

Those living to the north of the factory didn't escape, because the groundwater drained to the north and north-east.

Soon people living in those areas were horrified to learn that for years before the leak Carbide had been routinely dumping thousands of tons of toxic waste into their drinking water. What's more they knew exactly what they were doing. Huge 'solar evaporation ponds' the size of lakes had been constructed against the advice of Carbide's own engineers, who warned that the ponds, which were waterproofed with polythene sheet as flimsy as black dustbin-liner would leak with disastrous consequences for people living nearby.

So it proved. For years poisons known to cause cancers and birth defects had been freely flowing into soil, wells, blood, wombs and breast milk, and wherever these filthy chemicals were found there also were found birth defects and cancers.

When the novel coronavirus blew into India, it was the people still ill from the injuries they suffered thirty-six years ago, who are again bearing the brunt of the disaster. Please turn over for the facts.



1. Work began on 16/03/2020. Total no. of workdays – 83 till 06/06/2020

2. No. of staff who worked

| Month | Sambhavna staff | Chingari staff | Total |
|-------|------------------------------|----------------|-------|
| March | 7 (Community Health Workers) | 0 | 7 |
| April | 25 | 13 | 38 |
| May | 25 | 18 | 43 |

3. Details of testing of staff for Corona Virus

| Staff | Total | April | May | Result |
|-----------|-------|-------|-----|----------|
| Sambhavna | 60 | 20 | 20 | Negative |
| Chingari | 47 | 01 | 27 | Negative |

4. Distribution of pamphlets

16,000 pamphlets in 81 localities

Nawab Colony, New Arif Nagar, Blue Moon Colony, Sundar Nagar (Lal Tanki), Gareeb Nagar, Sundar Nagar, Prem Nagar, Odiya Basti, Navjeevan Colony, New Block Kainchi Chhola, Chhola Mandir, Railway Coach Factory, Karariya Farm, Rajendra Nagar, Intercity, Hari city, Vindhyachal valley, Kainchi Chhola, Karim Baksh, Risaldar Colony, Rajgarh Colony, Dwarka Nagar, Khushipura, Semra, Khajanchi Bag, Shubhash Nagar, Vinayak Campus, Railway Colony, Vijayanagar, Kapda mill chawl, Chandbad, Hinoutia, Pushpa Nagar, Krishna Nagar, Ashoka Garden, Aishbag, Bag Umrao Dulha, Aishbag stadium, Rani Aman Bai Colony, Jinsi, Bank Colony, Jehangirabad, Bhopal railway station, Phoota maqbara, Dharam kaantaa, Kabadkhana, Ghoda nakkas, Mangalwara, Lalwani Press road, , Itwara, Chowk Bazar, Lakherapura, Marwadi Road, Azad Market, Jumerati, Laxmi Talkies, Ibrahim ganj, Puttha mill colony, Bal vihar, Noor Mahal Paayga, Bag Munshi Hussain Khan, Gangoronwaali Baavdi, Sindhi colony, P&T Colony, Nagar Nigam Colony, Putlighar, Indira Nagar, Shahajehanabad, Motia Talab, Bhopal gate, SBI Chouraha, Shaheed Nagar, Taazul masjid, Royal market, Hamidia Hospital, Kamla Nehru Hospital GPO Chouraha, Noor Mahal Road, Shubhash Nagar

5. Social media

a. Whatsapp

b. Facebook

| Details of WhatsApp Groups Created by Sambhavna Trust Clinic for Awareness on Novel Corona Virus Pandemic | | |
|---|-------------------------------|-------------------------------------|
| Cordinator | Name of Group | Description of Members |
| Ashutosh | COVID 19 Sambhavna Hospital | Persons taking care at the Clinic |
| | COVID 19 Sambhavna Trust | Persons who are part of Research |
| Ankit | COVID 19 Sambhavna Hospital | Persons taking care at the Clinic |
| Rajni | COVID 19 Sambhavna Hospital | Persons taking care at the Clinic |
| | Preet Nagar | Residents of Preet Nagar |
| Nitesh | COVID 19 Sambhavna Hospital | Persons taking care at the Clinic |
| Tabassum | Sambhavna Sundar Nagar | Residents of Sundar Nagar Lal Tanki |
| Rahul | Shivshakti Nagar COVID 19 | Residents of Shivshakti Nagar |
| Chandrasekhar | COVID 19 Sambhavna Hospital 1 | Persons taking care at the Clinic |
| | COVID 19 Sambhavna Hospital 2 | Persons who are part of Research |
| Sudhir | COVID 19 Sambhavna Hospital | Persons taking care at the clinic |
| | COVID 19 Sambhavna Hospital | Persons taking care at the clinic |
| Rohit | COVID 19 Sambhavna Hospital | Persons taking care at clinic |
| | COVID 19 Sambhavna Hospital | Persons who are part of Research |
| Bhagwan Singh | COVID 19 Sambhavna Hospital | Persons who are part of Research |
| | COVID 19 Sambhavna Hospital | Persons who are part of Research |
| Radhe Lal | Go Corona | (Mix) Clinic,Research,20 community |
| | COVID 19 Sambhavna Trust | (Mix) Clinic,Research,20 community |
| | COVID 19 Sambhavna Hospital | (Mix) Clinic,Research,20 community |
| | COVID 19 Sambhavna Trust | (Mix) Clinic,Research,20 community |
| | Sambhavna Hospital Corona | (Mix) Clinic,Research,20 community |

Table continues across next two pages



mic

| Started on | Max no. / Min no. | Abusers | Active members | Recruiters |
|------------|-------------------|---------|----------------|------------|
| 25/03/2020 | 190 / 73 | 0 | 0 | 0 |
| 25/03/2020 | 280 / 87 | 0 | 0 | 0 |
| 27/03/2020 | 154 / 86 | 0 | 12 | 2 |
| 30/03/2020 | 25 / 15 | 0 | 2 | 0 |
| 15/04/2020 | 91 / 51 | 0 | 5 | 0 |
| 28/03/2020 | 123 / 71 | 0 | 5 | 1 |
| 16/04/2020 | 133 / 102 | 1 | 12 | 10 |
| 17/04/2020 | 127 / 83 | 0 | 2 | 21 |
| 27/03/2020 | 130 / 75 | 0 | 2 | 0 |
| 27/03/2020 | 95 / 38 | 0 | 0 | 0 |
| 26/03/2020 | 252/131 | 0 | 0 | 0 |
| 26/03/2020 | 189/39 | 0 | 0 | 0 |
| 27/03/2020 | 89/67 | 0 | 4 | 0 |
| 28/03/2020 | 60/30 | 0 | 2 | 0 |
| 29/03/2020 | 94/46 | 0 | 5 | 1 |
| 29/03/2020 | 43/22 | 0 | 3 | 1 |
| 25/03/2020 | 135/61 | 0 | 4 | 0 |
| 24/03/2020 | 135/77 | 0 | 5 | 0 |
| 21/03/2020 | 200/121 | 5 | 5 | 0 |
| 27/03/2020 | 63/31 | 0 | 3 | 0 |
| 29/03/2020 | 80/67 | 0 | 2 | 0 |
| | | | | |
| | | | | |

*Others includes persons posting good morning and goodnight, comedy videos, sensational and incorrect information

| Others* | Drop outs | |
|---------|-----------|---------------|
| 0 | 117 | Coordinator |
| 3 | 193 | Ashutosh |
| 7 | 61 | Ankit |
| 3 | 10 | |
| 5 | 40 | Rajni |
| 2 | 50 | Nitesh |
| 23 | 31 | Tabassum |
| 7 | 44 | Rahul |
| 2 | 45 | |
| 4 | 57 | Chandrasekhar |
| 8 | 121 | |
| 0 | 150 | Sudhir |
| 4 | 22 | |
| 2 | 30 | Rohit |
| 1 | 48 | |
| 0 | 21 | Bhagwan Singh |
| 15 | 74 | |
| 9 | 58 | |
| 22 | 79 | |
| 8 | 32 | |
| 10 | 13 | Radhe Lal |
| | | |
| | | |

6. Community Health Volunteers in different communities

| Community | Total No of volunteers | Female | Male |
|--------------------------|------------------------|-----------|-----------|
| S h r i r a m Nagar | 11 | 6 | 5 |
| New Arif Nagar | 12 | 8 | 4 |
| Annu Nagar | 16 | 14 | 2 |
| Blue Moon Colony | 13 | 9 | 4 |
| N a w a b Colony | 12 | 7 | 5 |
| Sundar Nagar | 6 | 1 | 5 |
| Preet Nagar | 21 | 8 | 13 |
| Shivshakti Nagar | 8 | 1 | 7 |
| Sundar Nagar (Lal Tanki) | 24 | 13 | 11 |
| S h a n k a r Nagar | 08 | 08 | 00 |
| Odiya Basti | 08 | 03 | 05 |
| G a r e e b Nagar | 18 | 09 | 09 |
| R a j g a r h Colony | 08 | 06 | 02 |
| S u b h a s h Nagar | 09 | 03 | 06 |
| Kargill Colony | 6 | 1 | 5 |
| Total | 180 | 97 | 83 |

Age of CHVs

| No of CHVs | Age 15 to 30 years | Age 31 to 60 years | Age above 60 years |
|------------|--------------------|--------------------|--------------------|
| 180 | 138 | 38 | 04 |

Occupation of CHVs

| Students | Housewives | Private job | W a g e worker | Total |
|----------|------------|-------------|----------------|-------|
| 67 | 37 | 36 | 40 | 180 |

7. Safety gear and equipment to CHVs

Safety gear : Surgical Masks, Aprons, Surgical Caps

Equipment : Thermometer, Pulse-oxymeter, Thermal scanner, BP Instrument

8. Information on Communities

| S N | Communities | No. of Families | Population |
|-----|--------------------------|-----------------|--------------|
| 1 | Shriram Nagar | 34 | 157 |
| 2 | New Arif Nagar | 341 | 1847 |
| 3 | Annu Nagar | 294 | 1564 |
| 4 | Blue Moon Colony | 254 | 1315 |
| 5 | Nawab Colony | 398 | 2105 |
| 6 | Sundar Nagar | 97 | 475 |
| 7 | Preet Nagar | 136 | 676 |
| 8 | Shivshakti Nagar | 293 | 1476 |
| 9 | Sundar Nagar (Lal Tanki) | 206 | 1007 |
| 10 | Shankar Nagar | 245 | 1136 |
| 11 | Odiya Basti | 118 | 512 |
| 12 | Gareeb Nagar | 370 | 1885 |
| 13 | Rajgarh Colony | 183 | 864 |
| 14 | Subhash Nagar | 153 | 809 |
| 15 | Kargill Colony | 60 | 294 |
| | Total | 3182 | 16122 |

Occupations and Economic condition of different communities.

The majority of residents of the 15 communities are Daily wage workers, Load carriers and porters, Auto drivers, Mechanics, masons, Rag-pickers, lower level employees in shops and businesses, beggars, vegetable and fruit vendors etc.

Economic condition

Except Shivshakti Nagar, Preet Nagar and Nawab Colony where about 30% are in lower-middle and middle class, in all the other communities, well over 90% are in the low income lower economic class category.

9. Persons in need of special monitoring different communities

| Communities | People in High risk category | Over 60 | Co-morbidities | Pregnant and in 3 rd semester |
|--------------------------|------------------------------|------------|----------------|--|
| Shriram Nagar | 45 | 39 | 06 | 06 |
| New Arif Nagar | 47 | 43 | 16 | 16 |
| Annu Nagar | 83 | 32 | 09 | 41 |
| Blue Moon Colony | 67 | 58 | 52 | 07 |
| Nawab Colony | 60 | 56 | 28 | 28 |
| Sundar Nagar | 33 | 30 | 08 | 13 |
| Preet Nagar | 100 | 84 | 36 | 05 |
| Shivshakti Nagar | 104 | 76 | 35 | 03 |
| Sundar Nagar (Lal Tanki) | 68 | 36 | 23 | 09 |
| Shankar Nagar | 102 | 71 | 13 | 22 |
| Odiya Basti | 35 | 27 | 7 | 06 |
| Gareeb Nagar | 172 | 103 | 68 | 08 |
| Rajgarh Colony | 49 | 36 | 17 | 06 |
| Subhash Nagar | 45 | 26 | 9 | 06 |
| Kargill Colony | 38 | 19 | 23 | 14 |
| Total | 1048 | 736 | 350 | 182 |

10. Persons who came from out of the state and were quarantined in different communities

| Communities | N u m b e r s quarantined |
|------------------|------------------------------|
| Subhash Nagar | 04 |
| Odiya Basti | 09 |
| Gareeb Nagar | 16 |
| Shivshakti Nagar | 02 |
| Preet Nagar | 01 |
| Sundar Nagar | 03 |
| Blue Moon Colony | 01 |
| Total | 36 |

11. People in different communities who were given primary care through different systems

| Communities | No of persons provided primary care | M o d e r n medicine | Ayurveda | Herbcar e |
|-----------------------------|--|-------------------------|----------|--------------|
| Shriram Nagar | 67 | 29 | 15 | 23 |
| New Arif Nagar | 25 | 07 | 08 | 10 |
| Annu Nagar | 30 | 19 | 03 | 08 |
| B l u e M o o n Colony | 59 | 14 | 20 | 25 |
| Nawab Colony | 35 | 17 | 04 | 14 |
| Sundar Nagar | 36 | 09 | 13 | 14 |
| Preet Nagar | 28 | 05 | 10 | 13 |
| Shivshakti Nagar | 13 | 08 | 03 | 02 |
| Sundar Nagar (Lal Tanki) | 75 | 36 | 18 | 21 |
| Shankar Nagar | 59 | 21 | 14 | 24 |
| Odiya Basti | 77 | 30 | 22 | 25 |

| | | | | |
|----------------|------------|----|----|----|
| Gareeb Nagar | 108 | 45 | 30 | 33 |
| Rajgarh Colony | 64 | 33 | 10 | 21 |
| Subhash Nagar | 75 | 33 | 13 | 29 |
| Kargill Colony | 27 | 08 | 05 | 14 |
| Total | 778 | | | |

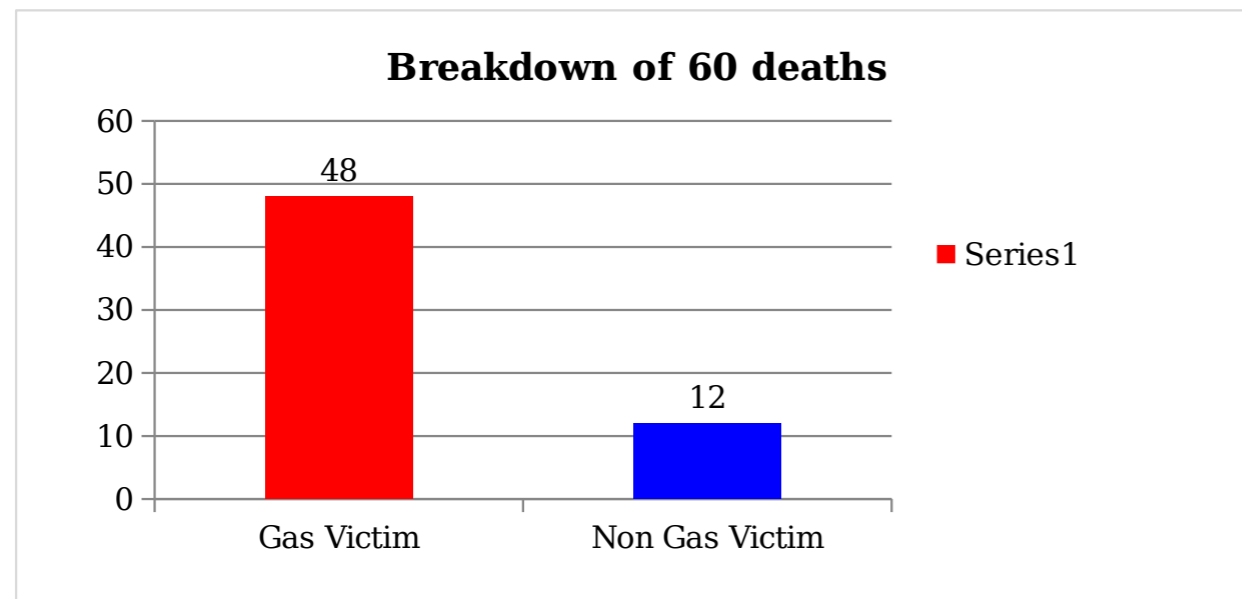
12. Persons sent for testing (for corona virus) and those who could get themselves tested.

| Communities | Sent for testing | Tested | Result |
|-----------------------------|------------------|------------|-------------------|
| Shriram Nagar | 59 | 44 | A I I negative |
| New Arif Nagar | 17 | 08 | A I I negative |
| Annu Nagar | 42 | 17 | A I I negative |
| Blue Moon Colony | 07 | 03 | A I I negative |
| Nawab Colony | 06 | 04 | A I I negative |
| Sundar Nagar | 33 | 08 | A I I negative |
| Preet Nagar | 60 | 22 | A I I negative |
| Shivshakti Nagar | 92 | 29 | A I I negative |
| Sundar Nagar (Lal Tanki) | 50 | 16 | A I I negative |
| Shankar Nagar | 35 | 11 | A I I negative |
| Odiya Basti | 43 | 10 | A I I negative |
| Gareeb Nagar | 95 | 47 | A I I negative |
| Rajgarh Colony | 20 | 07 | A I I negative |
| Subhash Nagar | 40 | 23 | A I I negative |
| Kargill Colony | 27 | 27 | A I I negative |
| Total | 626 | 276 | A I I negative |

Analysis of 60 Deaths of due COVID-19 (6 April-11 June)

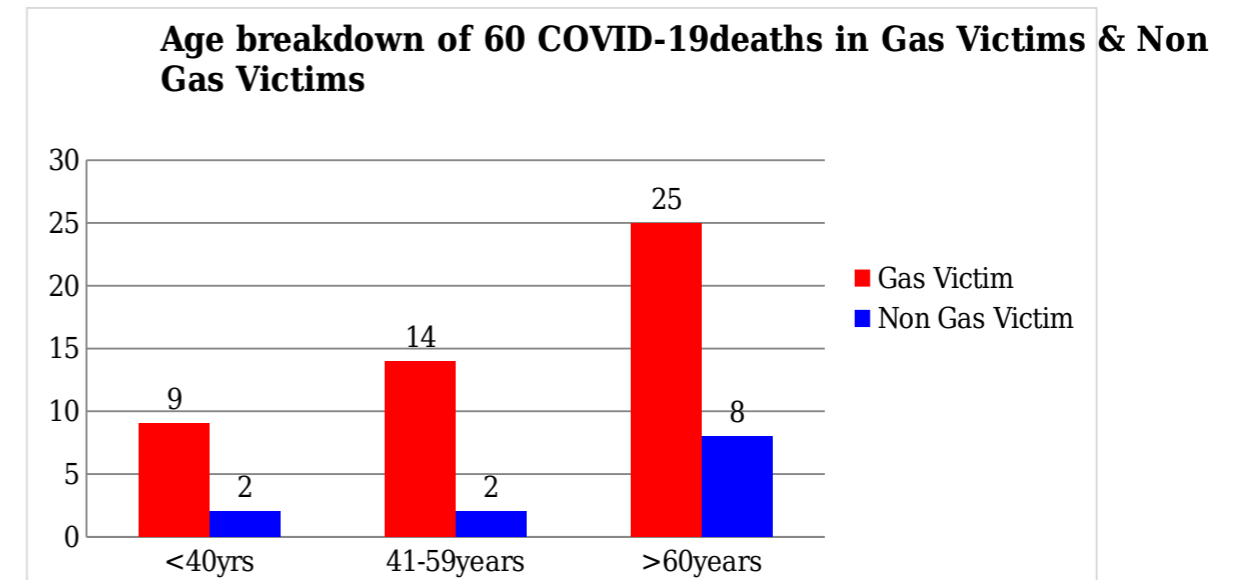
1. COVID-19 Deaths among Gas Victims & Non Gas Victims

- **74% of Deaths (45) due to COVID-19 are of Bhopal Gas Victims.**
- 5% of Deaths (3) due to COVID-19 are of children born to gas exposed parents.
- 21% of deaths due to COVID-19 are of Non Gas victims



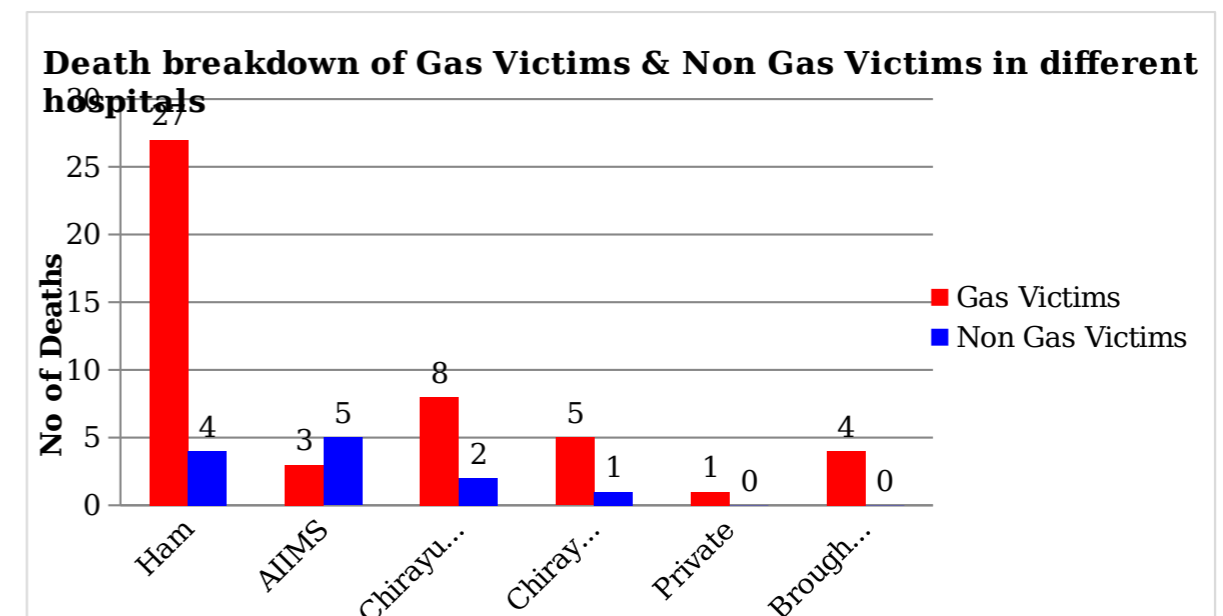
2. Under 60 COVID-19 Deaths has a overwhelming majority of Gas Victims.

- **Among the COVID-19 deaths of people under the age of 60, 85% of those are gas victims.**
- Among the COVID-19 deaths of people under the age of 40, 82% of those are gas victims & 18% are non gas victims. 4 times more gas victims under the age of 40 have died than compared to non gas victims.
- Among the COVID-19 deaths of people between the age of 41-59, 87.5% are gas victims and 12.5% are non gas victims. 7 times more gas victims between the age of 41-59 have died than compared to non gas victims.



3. COVID-19 Deaths in different hospitals

- **87% of gas victims (27) died in Hamidia hospital**
- **100% of those who were “brought dead” to hospital were gas victims**
- 55% of COVID -19 Deaths happened in Hamidia hospital, 14% in AIIMS, 28.3% in Chirayu hospital, 11% in Chirayu Mix (admitted in Hamdia, referred to chirayu after some time and died in Chirayu) & 1.7% died in Private hospital

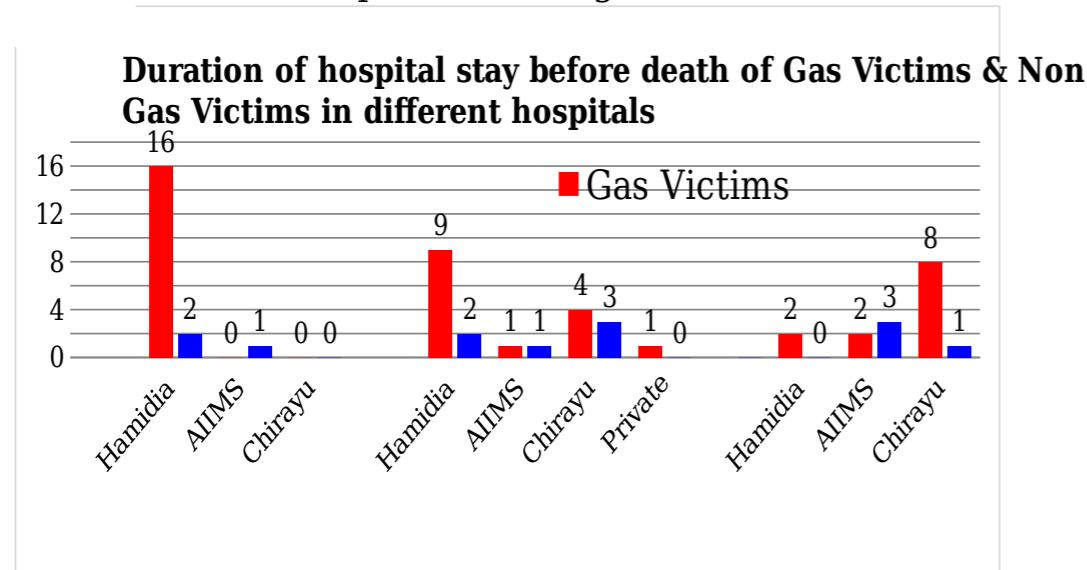


4. Hosptial Stay before death due to COVID-19 (Data based on 56 patients as 4 were 'brought dead')

75% of the gas victims died within 5 days of hospital stay

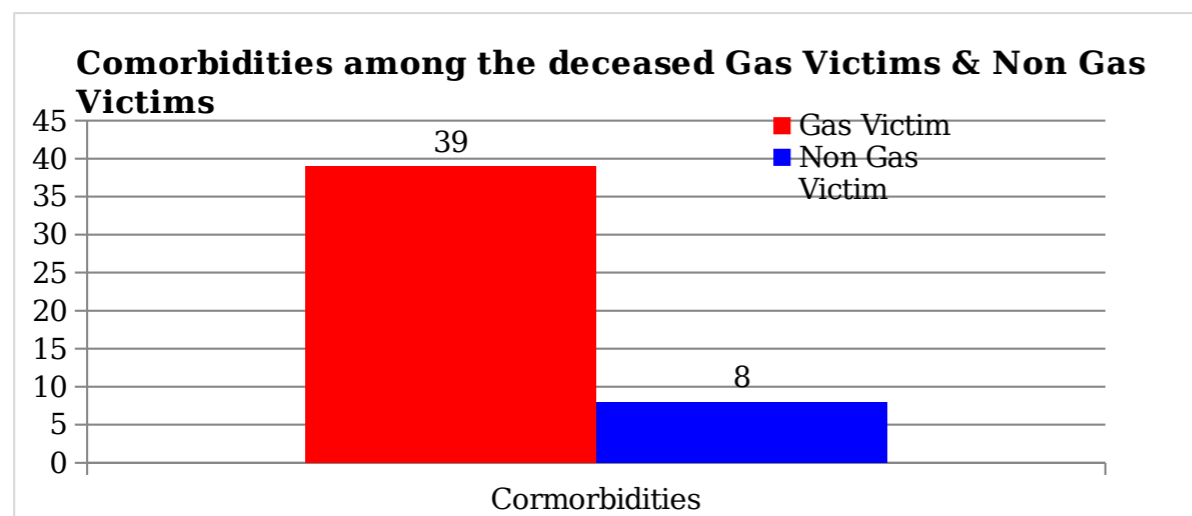
- Of all the deaths within 24 hrs of admission; 84% of those were gas victims. 7 times more gas victims died within 24hrs of admission when compared to non gas victims.

- Of all the deaths within 2-5 day hospital day; 71.4% of them were gas victims. 3 times more gas victims died within 24hrs of admission when compared to non gas victims.



5. Co-morbidities of COVID-19 deaths

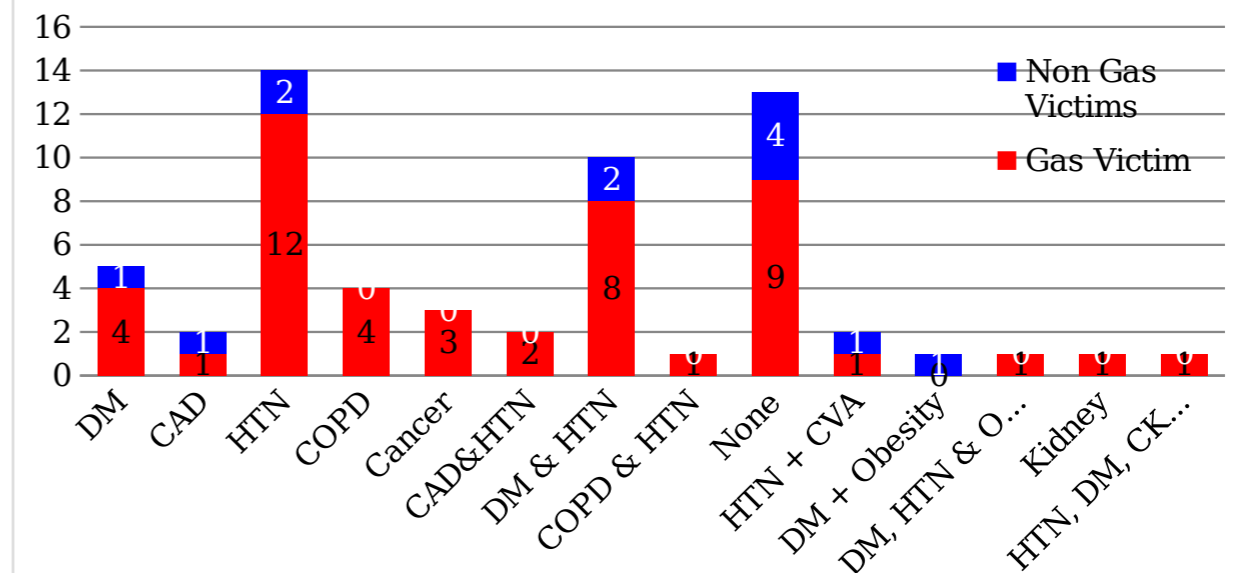
- Out of the gas victims who died due to COVID-19, 81% had comorbidities as a result of gas exposure.**
- 62% of gas victims & only 13% of non gas victims who died due to COVID-19 had comorbidities.
- The rate of comorbidities in deceased gas victims due to COVID-19 is 5 times more than deceased non gas victims.



6. Type of Comorbidities in COVID-19 deaths

- Gas victims suffering from disease of Lungs, Heart, Kidney & Brain are 3 to 6 times more than non gas victims**
- 40% of gas victims & 6.5% of non gas victims suffered from One morbidity of heart, lungs, brain or kidney.
- 20% of gas victims & 6.5% of non gas victims suffered from Two morbidities of Heart, Lungs, Brain or Kidney.

Co-Morbidities of Gas Victims & Non Gas Victims



DM-Diabetes Mellitus, CAD-Coronary Artery Disease, HTN: Hypertension, COPD-Chronic Obstructive Pulmonary Disease, CKD-chronic kidney disease



Press Statement**24 November 2020**

Four organizations of survivors of the Bhopal gas disaster demanded that Union Carbide and its owner Dow Chemical pay additional compensation for the long term injuries caused to the gas exposed people as evidenced in the ongoing COVID 19 Pandemic. The organizations presented official records which showed that COVID-19 death rate in the gas exposed population is 6.5 times more than that of the non gas exposed population of the Bhopal district.

“The Pandemic has exposed the official lie that 93% of those exposed to Union Carbide’s poisonous gases had only temporary injuries.” said Rashida Bee, President of the Bhopal Gas Peedit Mahila Stationery Karmchari Sangh. “We have official records that show that the gas exposed population, that is 17% of the district’s population of 2.8 million, has contributed to 56% of the COVID-19 deaths in the district so far.

“It is time the Indian government presented these and other hospital records before the Supreme Court that is yet to hear the Curative Petition for additional compensation for damage caused by the December 1984 disaster” said Nawab Khan, President of the Bhopal Gas Peedit Mahila Purush Sangharsh Morcha.

Rachna Dhingra of the Bhopal Group for Information & Action said that Union Carbide’s own documents state that the injuries caused by exposure to Methyl Isocyanate are permanent in nature yet more than 90% of the exposed people have been paid only 500 US dollars compensation for temporary injuries “It is a pity that it took a global Pandemic to highlight the injustice meted to the victims of the world’s worst industrial disaster.” she said.

“Dow Chemical has used the Pandemic to cut thousands of jobs and make more profit by producing hand sanitisers, but it looks the other way when the Pandemic exposes the lasting damage its subsidiary caused in Bhopal. Dow Chemical continues to evade the pending civil, criminal and environmental liabilities of Union Carbide in Bhopal.” Said Nausheen Khan of Children Against Dow Carbide.

Rashida Bi
Bhopal Gas Peedit Mahila Stationery Karmchari Sangh
9425688215

Nawab Khan,
Bhopal Gas Peedit Mahila Purush Sangharsh Morcha
9165347881

Rachna Dhingra
Bhopal Group for Information and Action
9826167369

Nausheen Khan
Children Against Dow Carbide
7987353953

Calculation of excess COVID-19 deaths in the gas exposed population

| S.No | Item | Numbers | Source |
|------|---|-----------------|---|
| 1 | POPULATION OF BHOPAL DISTRICT IN 2020 | 28,00,000 | Census data |
| 2 | No of people injured by gas exposure | 5,68,293 | Office of the Welfare Commissioner-Bhopal gas victims |
| 3 | Less Estimated No of Deaths in the years following the disaster (20,000) | 20,000 | Information based Estimates |
| 4 | Less Estimated No of persons who migrated out of the district. (15% of 5,68,293) | 85,243 | Estimated |
| 5 | POPULATION OF GAS VICTIMS IN BHOPAL DISTRICT IN 2020 | 4,63,050 | |
| | No of COVID 19 deaths in Bhopal District | 450 | Corona Health Bulletin of Dept of Health & Family Welfare, Govt of MP- as 18 October 2020 |
| 6 | No of COVID 19 deaths of gas exposed persons in Bhopal District | 254 | BMHRC Smart card or compensation order copy |
| 7 | Applying District's COVID 19 death rate to gas exposed population Number of COVID 19 deaths expected in a population of 463050 (463050X450deaths/28lakhs) | 74 | |
| 8 | Excess deaths attributable to Exposure to Union Carbide's gases (254-74) | 180 | |

Bhopal COVID 19 Mortality Rates

| | COVID-19 Death | Total Population | Death/100000 Population |
|-----------------|----------------|------------------|-------------------------|
| Gas Exposed | 254 | 4,63,050 | 54.85 |
| Non Gas Exposed | 196 | 2,336,950 | 8.39 |
| Total | 450 | 28,00,000 | |

COVID 19 Mortality rate among Gas Exposed is $54.85/8.39 = 6.54$ times more than mortality rate in non gas exposed population.

Figures for Deaths

As per the health bulletin of the Department of Health & Family Welfare, Govt of MP, on 15 November 2020, Bhopal District recorded deaths of 498 people due to COVID-19. Out of these 498 deaths, we were able to track down families of 450 as the remaining 48 remain unreachable due to incorrect phone numbers & addresses. Out of 450 COVID-19 deaths, 254 are those who have proof issued by the Government of being gas exposed and the remaining 196 did not have proof of being gas exposed.

Summary:

1. Population of Bhopal district = 2,800,000
2. Population of living gas exposed persons = 568,293 - 85,243 (15%) - 20,000 (deaths above the official figure of 5295) = 463,050
3. No of deaths in district = 450
4. No of gas exposed deaths = 254
5. Applying District's death rate to gas exposed population no of deaths expected = 74
5. Excess deaths = 254 - 74 = 180

अगली बरसात तक क्या करें, क्या न करें

| क्र.सं. | करें | न करें |
|---------|---|--|
| 1. | घर में सही ढंग से नालियाँ बनाए रखें। नालियों को साफ रखें। | नाली छेद, नाली की ढाँची को सड़क पर गिराएँ। नाली छेदों में कचरा डालें। नाली को ढाँची से ढक दें। |
| 2. | घर में कचरा जहाँ पर जलपाई नहीं है वहाँ से नाली को सड़क पर गिरा दें। नाली में कचरा न डालें। नाली में जलपाई नहीं है वहाँ से नाली को सड़क पर गिरा दें। | नाली में कचरा न डालें। नाली में जलपाई नहीं है वहाँ से नाली को सड़क पर गिरा दें। |
| 3. | नाली और नाली में नालीपाई को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। |
| 4. | नाली में जलपाई नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। |
| 5. | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। |
| 6. | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। |
| 7. | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। |
| 8. | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। |
| 9. | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। |
| 10. | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। | नाली को सड़क पर गिरा दें। नाली को सड़क पर गिरा दें। |

अलग अलग मोहल्ले के स्वयंसेवकों के नाम और फ़ोन नम्बर

| अलग अलग | मोहल्ला | फ़ोन नम्बर | अलग अलग | मोहल्ला | फ़ोन नम्बर |
|---------|---------|------------|---------|---------|------------|
| अलग अलग | मोहल्ला | फ़ोन नम्बर | अलग अलग | मोहल्ला | फ़ोन नम्बर |
| अलग अलग | मोहल्ला | फ़ोन नम्बर | अलग अलग | मोहल्ला | फ़ोन नम्बर |
| अलग अलग | मोहल्ला | फ़ोन नम्बर | अलग अलग | मोहल्ला | फ़ोन नम्बर |
| अलग अलग | मोहल्ला | फ़ोन नम्बर | अलग अलग | मोहल्ला | फ़ोन नम्बर |

पंजीकृत जनसेवा संस्थाएँ सम्भावना ट्रस्ट और विगरी ट्रस्ट द्वारा जनहित में प्रकाशित

Young health volunteers beside a coronavirus information poster they helped place in their community in Bhopal, September 2020