



THE PUBLIC HEALTH CRISIS

HIDDEN IN AMAZON WAREHOUSES

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Findings At a Glance: Amazon's work quota and surveillance practices are causing a public health crisis for warehouse workers and delivery drivers—with grave impacts on worker health, safety, and well-being. To protect worker health and end this crisis, California policymakers and government agencies need to create and enforce workplace standards to protect workers' safety. This includes ergonomic working conditions, stronger COVID-19 precautions, and an end to the work quota system at Amazon and throughout the warehousing industry.

Amazon's policies have created a public health crisis for warehouse workers and delivery drivers

"I hurt my hand, and . . . the following day I couldn't work. . . . A lot of people that I know have hurt their back and they don't want to say anything because they don't want to lose money, time. . . . I wanted them to send me to a doctor so that I could get a good checkup because I couldn't work. . . . I was afraid that they were going to fire me."

— Adilene, Inducting/Rebin Worker, 1 year at LGB3, Eastvale, CA

Adilene had been working at Amazon's LGB3 Warehouse in Eastvale, California, for about a year when she sustained a serious injury to her hand while on the job. Her injury — the direct result of the dangerous pace at which she was required to work in order to meet Amazon's quota — may have life-long impacts on her opportunities for future employment. Adilene's story is all too common among the more than 91,000 Amazon warehouse workers across California, who face multiple health risks and severe ergonomic stressors as a result of Amazon's excessive work quotas and surveillance system.

Amazon's policies create an inhumane working environment that causes frequent injuries and chronic stress among workers, along with economic insecurity due to frequent firings and injury-related job displacement. Amidst the ongoing pandemic, the health risks are heightened as COVID-19 outbreaks continue to rise in warehouses. Amazon's workplace policies are precipitating a public health crisis that impacts thousands of workers in California, as well as their families and our broader communities.



All people deserve a work environment in which their health and safety are valued and protected.

Policymakers and public health agencies have a responsibility to uphold labor standards and protect worker health. California policymakers and government agencies need to create and enforce workplace standards to protect the health and safety of Amazon workers like Adilene, and the more than 91,000 Californians who work either full-time or part-time for the company.

The labor of essential workers like Adilene enables millions of people across the country to purchase and receive goods directly to their doorsteps, with seemingly little more than the click of a button. During COVID-19, Amazon warehouse workers' labor has been especially critical in allowing many to receive goods and necessities from the safety of their own homes, while following shelter-in-place orders and limiting potential exposure to the virus. Amazon has profited wildly — the company announced \$88.9 billion in earnings in its second fiscal quarter of 2020 alone.

Yet the convenient consumer experience and bloated earnings hide what is truly at stake: the health, well-being, and economic security of Amazon warehouse workers and delivery drivers — who face a dangerous reality daily.

Policymakers need to take urgent action to protect workers' health.

Human Impact Partners (HIP), in collaboration with the Warehouse Worker Resource Center (WWRC), conducted a public health study to examine how Amazon's pace of work policies and practices affect worker health, safety, and well-being. We interviewed and surveyed Amazon workers, including full-time and part-time workers at Amazon fulfillment and delivery centers, and Amazon subcontracted delivery drivers, at facilities in Southern California.*

Our findings reveal an urgent need for California policymakers and government agencies to create and enforce workplace standards that protect workers' health and safety. We hope this research will be a tool for workers, advocates, and California policymakers to take the following urgent actions to protect public health:

- Prohibit inhumane and hazardous production standards at Amazon and throughout the warehouse industry
- Ensure working conditions are within an ergonomic framework
- Implement stronger COVID-19 precautions at all Amazon warehouses and for subcontracted delivery drivers, including unlimited time for hand washing, proper and regular sanitizing of workstations, and accessible restrooms for drivers

** Amazon's fulfillment and delivery network uses a franchise model to subcontract out to delivery companies. For this study, Amazon drivers we interviewed deliver Amazon packages and drive Amazon-branded vehicles.*



Amazon's Production Standards: Quotas, Rates, and "TOT"

Throughout this brief, we use the following terms to refer to the various productivity requirements Amazon imposes on workers:

- **Work quotas:** The number of times a worker has to perform a task per hour; sometimes used interchangeably with "work rates"
- **Work rates:** A common way of referring to work quotas within Amazon; "rate" is short for a worker's "rate of productivity"
- **Making rate:** Workers commonly refer to the task of keeping up with the quota as "making rate"
- **Time Off Task (TOT):** If a worker pauses or breaks from performing certain tasks, such as scanning, that break time is tracked. After a certain amount of time, usually 6 minutes, that time is logged as "Time Off Task" (TOT). Workers may receive a notification indicating they have spent too much Time Off Task (TOT), and they can be disciplined or fired for accumulating too much TOT.
- **Time Off Task (TOT) Limit:** Once a worker activates the 6-minute TOT threshold in a day, the clock keeps running on their TOT limit. There is typically a 30-minute TOT limit, per day, after which workers have faced disciplinary action, including firings. Our understanding is that it's used to discipline workers, but we haven't seen anything written since workers report that Amazon managers refuse to give anything in writing.



Amazon's quota system harms worker health

"The point is this, that they're killing the drivers. Period, point blank. They're killing us with too much of the load. The load is too high. . . . It's a strain on our bodies to carry that type of load."

— Ted, Subcontracted Delivery Driver, Hawthorne, CA

Amazon requires all warehouse workers and delivery drivers to perform tasks in accordance with strict, algorithmically generated quotas. To track if workers are making rate, Amazon monitors employees at all times via the handheld scanners many warehouse employees use, software on workers' computers, and through a tracking app on delivery drivers' mobile phones.

Exactly how Amazon determines work quotas remains unclear to many employees. Workers we spoke with expressed that their quotas seem to be arbitrary, fluctuating without warning based on task, day, and season. Since the onset of the pandemic, many report that quota requirements have increased, and a majority (72%) reported that the increased pace of work is significantly more stressful than it was in pre-COVID-19 times.

Workers reported that Amazon's excessive quotas make it impossible to complete work and make rate safely. The majority of workers surveyed reported that they experienced a constant state of stress trying to keep up. One warehouse worker reported that in order to make rate, she is required to scan a minimum of 200 items an hour, regardless of the size of the item. If she stops scanning for more than six minutes — for example, to pack and scan a larger item, which can be more time-consuming — Amazon's scanning device sounds an alarm indicating that she has spent too much Time Off Task (TOT). When workers surpass Amazon's TOT limit or fail to make rate, they face scrutiny and write-ups, and can be terminated.

Amazon's surveillance practices and inhumane production standards are unrelenting and unforgiving. Workers are monitored by cameras and a computer system that are insensitive to human needs. If a worker needs to use the restroom or requires extra time to complete a complex task, there is seldom an opportunity to pass this by a human manager — they can still receive a TOT warning.



Who works at Amazon warehouses in California?

According to Amazon, more than 91,000 Californians work either full-time or part-time for the company.¹

A 2018 article reported that 30,000 people worked full-time as warehouse workers in California² — although the exact number of Californians employed by Amazon is difficult to ascertain due to the company's extremely high annual employee turnover rate. One study found that once Amazon opened a fulfillment center in a region, the turnover for warehouse workers in these counties dramatically increased to 100% — far exceeding the industry average of 83% annual worker turnover in California, and 68.8% turnover nationally.³

The majority of Amazon warehouse workers are people of color. In the warehousing industry, workers of color make up 66% of workers, with Latinx and Black workers employed in warehousing at twice the rate of all other industries.⁴ At Amazon warehouses in California, the majority of warehouse workers are people of color, with 54% Latinx workers, 9.5% Asian, and 9% Black.⁵

Amazon warehouse workers experience high rates of serious injury

"I was injured during peak when they changed our schedule from four 10-hour shifts to five 12-hour shifts. A lot of us actually ended up getting injured because we weren't used to the two extra hours and the whole extra 12-hour day."

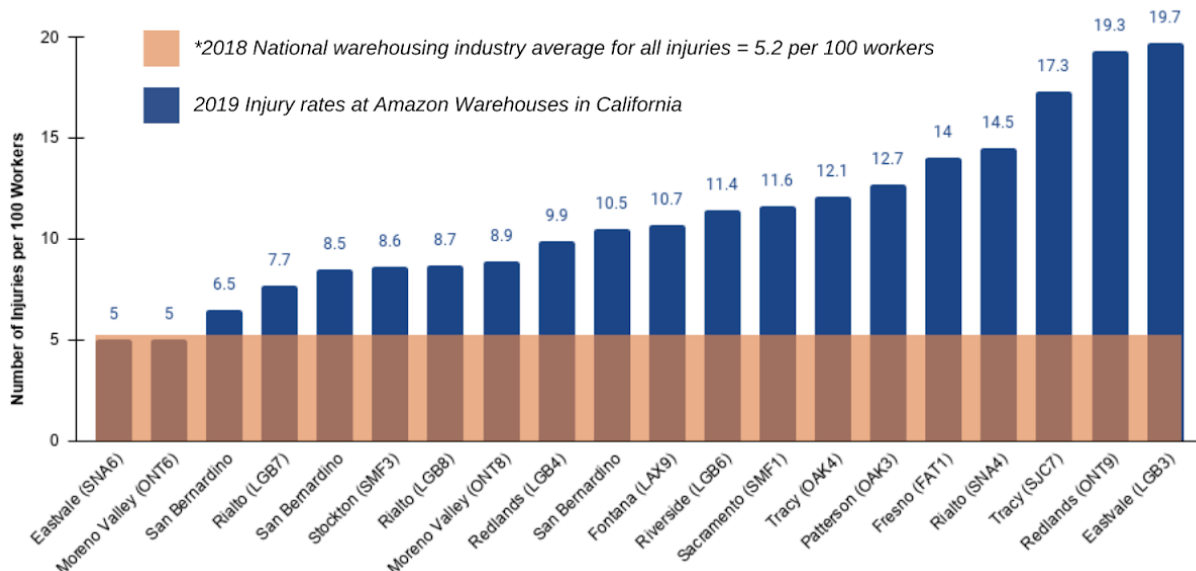
— *Samantha, Inbound Stow, 1 year at LGB3, Eastvale, CA*

Amazon warehouse workers experience nearly double the national average rate of serious injuries of workers in the general warehousing industry.⁵ At some Amazon warehouses, the rate of serious injury is even higher. For example, at LGB3, an Amazon fulfillment center in Eastvale, California, where we interviewed workers like Adilene — warehouse employees experience serious injuries at *more than four times the national average*.⁶ In 2019, workers at Amazon fulfillment centers across the country experienced at least 14,000 serious injuries.⁵

The investigation that uncovered the spike in serious injuries at Amazon warehouses classified on-the-job injuries as “serious” based on the US Bureau of Labor Statistics category of injuries known as “DART” — an acronym to categorize injuries that require days away from work, restrictions on the job, or job transfer.^{7,8}

Injury logs of Amazon warehouses show that rates of injuries increase during Amazon’s peak rush seasons, typically around holidays and Prime Day, when workers are forced to increase their workloads and quotas surge without adequate rest breaks.⁵ And the worker injury rates at nearly all Amazon warehouses in California are higher than the national average for warehouses, with some recording nearly four times the national average.⁶

2019 Rate of All Injuries at Amazon Warehouses in California



*The most recent industry-wide data is from 2018. This data on all recorded injury rates is from the BLS Injury, Illness, and Fatalities Data for 2018 https://www.bls.gov/iif/oshwc/osh/os/summ1_00_2018.htm The Amazon warehouse data is from the most recent data available from 2019.

This data is likely underreported. Workers share that many injuries go unreported altogether, as people fear termination. Recent investigations have found that Amazon’s practices intentionally hide worker injuries to keep data from registering on national injury logs.⁵ This includes arrangements with Amazon-contracted medical providers that discourage doctors and nurses from diagnosing and treating employees with serious injuries, even when care is needed.⁵ Another investigation found that Amazon workers miss an average of five-and-a-half weeks of work to recover from workplace injuries, indicating the severity of many injuries.⁹



Amazon's dangerous rates cause injuries

"My dream job ended up being my nightmare, because I don't have my health anymore."

— Keith, Maintenance Technician, 4 years at LGB3, Eastvale, CA

"I injured my back by working too fast trying to make the quota and prevent getting a write-up."

— Anonymous Amazon worker, Southern CA facility

Amazon's work rates dictate a dangerous pace of work that leads to injury. Research demonstrates that a fast pace of work is associated with a range of health impacts, including neck and shoulder pain, muscle or joint symptoms, and back disorders.^{10,11} Some research points to a dose-response relationship, with increased work pace associated with increased severity of physical injury.¹²

In our research, 67% of all warehouse workers surveyed reported developing injuries from their work at Amazon. Additionally, the majority of workers surveyed (75%) reported that their required rate is either "always" or "often" too high to work at a safe pace. Further, more than 75% surveyed said they experience physical pain and/or injuries as a result of trying to make rate.

A fast work pace correlates with a 30% greater likelihood of muscle or joint symptoms after adjusting for physical stressors and personal characteristics.¹³ Further, an association has been found between worker-reported fast work pace and self-reported back pain.¹³

With the high prevalence of workplace injuries and chronic pain among Amazon workers, many Amazon warehouses have dedicated emergency-care clinics, known as *Amcare*, as well as vending machines stocked with pain medication.¹⁴ Workers have reported that these measures are intended to keep injuries and health complaints quiet and within the walls of Amazon, rather than to truly support worker health.¹⁵ Some have filed formal complaints with the Department of Labor's Occupational Safety and Health Administration (OSHA) regarding the lack of ethical care at Amcare sites: one complaint filed by a worker at an Amazon warehouse in Tracy, California, reported that Amcare refused to treat their injury.¹⁵

Amazon's quotas and surveillance cause stress and anxiety that harm workers' health

It really messes with your anxiety because it's like . . . am I going to get fired because I'm not good enough? Am I going to get written up today? . . . Am I going to get in trouble? It's really stressful, and it causes anxiety. . . . It's kind of depressing, too."

— Mary, Stow Worker, 6 months at LGB3, Eastvale, CA

"When you work at Amazon and get hurt, you become someone that is no longer useful for them and they don't even worry about you, or ask you how you're doing. . . . They haven't even called me to ask me how I'm doing."

— Adilene, Inducting/Rebin Worker, 1 year at LGB3, Eastvale, CA

Amazon uses a remote surveillance system to track warehouse workers and subcontracted delivery drivers at all times while they're on the job. Survey respondents shared that the constant surveillance causes them stress, anxiety, and depression. In addition to the fear of automatic TOT write-ups via Amazon's surveillance technology, workers are also often terminated directly by the system, rather than by a human manager or supervisor — meaning people are often fired without any opportunity to understand *why*.

This causes workers undue stress and anxiety, as they have no recourse when charges against them are unsubstantiated or due to necessary circumstances — like complying with CDC-recommended COVID-19 hand-washing and hygiene practices. Paired with Amazon's excessive quotas, this inhumane and alienating reality keeps many workers in a state of chronic stress.



Chronic stress harms physical and mental health

People are able to adapt to momentary stressors — but when the stress becomes constant and unrelenting, the body and mind suffer. In 2015, researchers at Harvard and Stanford conducted a meta-analysis of 228 workplace studies and found that chronic workplace stress was as harmful to the body as second-hand smoke.¹⁶



Chronic stress can lead to countless health issues, including immune-system damage, anxiety and depression, heart disease, digestive issues, headaches, sleep and memory issues, and weight gain.¹⁷ The workplace meta-analysis also found that frequently working more than 40 hours a week — as Amazon workers are routinely forced to do during peak seasons — makes workers nearly 20% more likely to die a premature death.¹⁶ Additionally, constant worry about losing their jobs increased the risk of developing poor health by 50%.¹⁶

Amazon workers experience stress-related illnesses and mental-health distress

“I want to kill myself. I honestly can’t stand working when I am so tired to even enjoy a moment of life.”

— Anonymous Amazon worker, Southern CA facility

The majority of workers we surveyed reported that they had developed or experienced a worsening of fatigue, exhaustion, anxiety, weight loss or weight gain, muscular and skeletal pain, trouble sleeping, and headaches or migraines since starting work at Amazon. Between 25 and 50% of survey respondents reported that they either developed or experienced a worsening of depression, panic attacks, and stomach and digestive issues since working at Amazon.

Additionally, some workers named dehydration and kidney issues, skin and hair problems, heart problems, and experiencing anger to the point of violence against others since beginning employment with the company. A small number of respondents also reported suicidality or thoughts of hurting themselves, smoking or vaping, and drug or alcohol abuse as health concerns that have developed or worsened since working at Amazon. A greater proportion of people who were very stressed about their rate also reported higher rates of anxiety, depression, and high blood pressure.



While our sample size for this survey is small, responses reflect larger trends that have been noted in similar studies and investigations of Amazon’s worker policies.^{18,19} Advocates and investigators have reported on the heightened risk of suicidality among Amazon workers — a recent study found that from 2013–2018, emergency workers were called to Amazon warehouses 189 times in response to suicide attempts and other mental-health crises.¹⁸ The total number of emergency calls is likely much greater, as some jurisdictions declined researchers’ requests for local 911 call logs to Amazon warehouses.¹⁸

Workers surveyed report the following health concerns developed or worsened since beginning work at Amazon

Reported Health Concern	Percent of Respondents (out of 26)
Fatigue or exhaustion	76.92%
Anxiety or often feeling anxious	69.23%
Weight loss or gain	62.50%
Muscle or skeletal pains or aches	60.00%
Trouble sleeping, unable to unwind	57.69%
Headaches or migraines	53.85%
Depression or feeling depressed	42.31%
Panic attacks	38.46%
Stomach and digestive problems	26.92%

Workers are denied use of the restroom and unable to take breaks

“During this time of COVID . . . you don’t really have time to wash your hands on a small break or lunch. No hand sanitizer around. It’s all really mentally stressful and draining.”

— Jennifer, Puller/Scanner Worker, 5 months at DLA8, Hawthorne, CA

Both warehouse workers and delivery drivers have reported that they are regularly denied use of the restroom due to Amazon’s policies. People working in Amazon warehouses reported that the closest restrooms are often 5–6 minutes away from workstations, meaning that using the restroom is impossible without activating the 6-minute TOT alarm. Delivery drivers have also reported being unable to use the restroom — with furious delivery schedules and no designated restrooms to use on the shift routes, workers must sometimes resort to urinating in bottles while in their delivery vehicles. Delivery drivers we interviewed also shared that they are often forced to skip lunch breaks entirely, needing to work through their lunch as they race to meet Amazon’s quotas.



Some of the workers we spoke with reported restricting the amount of water they drink while on the job, in an attempt to reduce time needed for restroom breaks and to avoid being penalized for TOT. Restricting water intake causes dehydration, which is hazardous to health — and when chronic, can lead to serious illnesses, including heat injury, urinary tract infections, kidney failure, seizures, and life-threatening hypovolemic shock.²⁰



COVID-19 intensifies risks to workers' health

"They are pushing for us to be even faster now because the volume did increase with COVID. So they're not giving us leeway on that. They're really pushing for us to go even faster. . . . It's just really stressful."

— Mary, Stow Worker, 6 months at LGB3, Eastvale, CA

"I'm scared to go into work because of COVID-19. . . . I have a disabled brother who is in a wheelchair, and he's got a trach[ostomy]. If he catches it, it'll kill him."

— Mike, Line Lead, Delivery Center ELA8, Hawthorne, CA

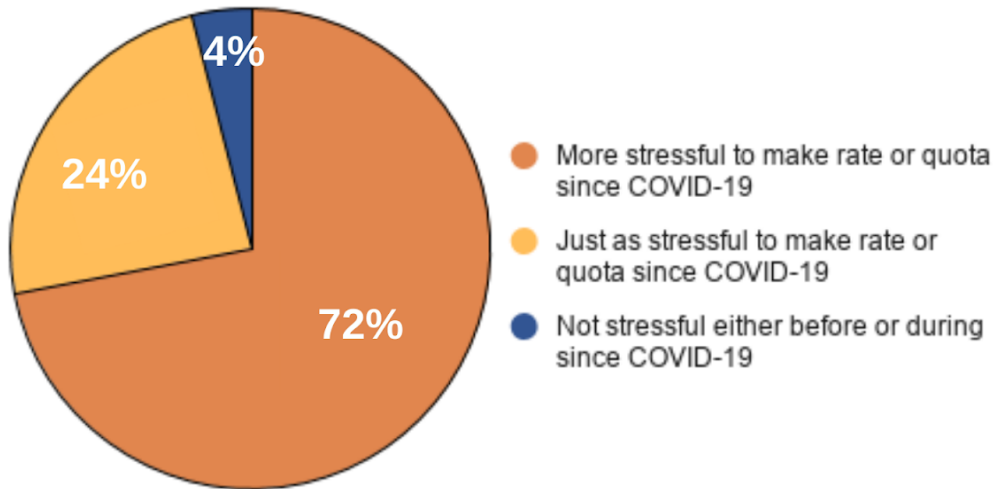
COVID-19 has increased the pace of work for Amazon warehouse workers and subcontracted delivery drivers, what with understaffing and an increased influx of online orders. Workers have reported that since the COVID-19 pandemic began, the pace of work has grown increasingly more demanding, causing heightened stress. Additionally, Amazon's quota and TOT system makes it impossible for workers to use the restroom, effectively barring them from proper CDC-recommended hand washing, which is crucial in controlling the spread of COVID-19.²¹

People also spoke of the fear and anxiety of going in to work throughout the pandemic, with COVID-19 outbreaks at many Amazon warehouses. From late March through June alone, there were at least 60 confirmed cases among Amazon warehouse workers in San Bernardino and Riverside counties, and at least 8 Amazon warehouse workers nationally have died from the virus.²²

Workers are afraid of contracting COVID-19 and have reported that Amazon only enforces CDC-recommended COVID-19 safety practices at warehouses when California's Occupational Safety and Health Association (Cal/OSHA) is actively completing an inspection. Employees have also noted that COVID-19 safety practices are inconsistently implemented: warehouses still lack the adequate number of hand-washing stations, workers are unable to wash their hands without risking TOT penalties, and equipment and workstations are not properly cleaned when outbreaks occur.

In the spring of 2020, Cal/OSHA opened an investigation into Amazon warehouses in Southern California.²³ After conducting on-site investigations of violations of workplace health and safety standards, Cal/OSHA cited two Amazon warehouses — Eastvale and Hawthorne in Los Angeles County — as failing to provide effective safety training related to COVID-19 precautions to employees.²³ In other words, Amazon did not provide effective safety training to employees, and thus failed to reduce workers' potential exposure to COVID-19.

The majority of workers surveyed reported that making rate has become more stressful since the onset of COVID-19



**Percentages represent the responses from 25 Amazon workers*



Amazon's policies perpetuate economic insecurity

Amazon's policies also create and perpetuate economic insecurity for workers and their families, which has negative impacts on health. Amazon workers are continuously subjected to economic insecurity due to:

- **Work-related injuries:** Sustaining an injury has caused workers to be pushed out of the company, while others remain tied up in prolonged workers' compensation cases without pay.⁹
- **Frequent firings and high employee turnover:** A recent investigation found that once Amazon moves into a county, the local county rates of warehouse employee turnover skyrocket to nearly 100%.³ Another investigation found that, amidst the COVID-19 pandemic, Amazon's turnover rate remains at nearly 100% — much higher than the industry average.^{3,24}
- **Long-term barriers to employment:** Some workplace injuries are so severe and chronic that they lead to a permanent disability. The absence of disability-friendly (or disability-accessible) work environments across industries means that people with disabilities face barriers to employment and few economic opportunities.²⁵

Economic security supports health

Economic security is key for people to thrive, manage stress, and help prevent disease. Economic security via a stable income is known to improve health outcomes, while economic insecurity can harm health considerably in the long term. Events that cause economic insecurity — like loss of a job — can have wide-ranging effects on a worker's family.



A job loss can make paying for key factors to maintain a healthy life — from housing and utilities, to healthy foods and health care — impossible.²⁶ Economic security has been shown to impact children's school readiness and achievement.²⁷⁻²⁹ Public health researchers have found that a stable and livable income is associated with living longer,^{30,31} and can help prevent chronic diseases including diabetes, kidney disease, liver disease, heart disease, hypertension, and stroke.³²



California policymakers and state agencies can implement standards that support worker health

Our research indicates that Amazon puts warehouse workers and subcontracted delivery drivers at risk of significant harm to their **physical and mental health** via dangerous **work pace requirements and surveillance methods**. The grueling pace of work and invasive monitoring practices cause workers to experience chronic stress, high injury rates, heightened risk of infectious disease, as well as job loss, economic insecurity, and associated health harms.

California policymakers and state agencies, including the Department of Public Health and Cal/OSHA, need to create more rigorous, enforceable, and public health-informed workplace standards to protect the health of workers and our broader California community. Agencies like Cal/OSHA must also maintain these standards at all worksites, including and particularly at Amazon facilities, to ensure workers are safe and healthy at work.

To support public health and safety, we recommend that California policymakers and the California Department of Public Health enact and implement the following recommendations:

- **Prohibit inhumane and hazardous production standards at Amazon and throughout the warehouse industry**

Each person's workload should be tailored to their individual physical and mental health needs, and should take into account the time required to perform each task ergonomically and with appropriate COVID-19 safety. A worker's daily task load should also consider the difficulty and complexity of the work assigned.

A best practice to ensure healthy and safe work is to directly involve workers in determining workloads and the pace of work. Research has found that job autonomy is important for good health, as people with more agency, involvement, and control over how they do their work experience better health.^{33,34} Quota systems without worker input increase worker stress, which causes long-term damage to the body.³⁵ Nearly all workers we interviewed for this report responded that either getting rid of or greatly reducing Amazon's required work quotas is key to improve their health and well-being.

Workers deserve agency regarding how and when they work, and they need clear channels of communication with Amazon in order to appeal write-ups and computer-automated employee terminations. After sustaining an injury or receiving



a software-generated TOT write-up, it is often difficult or impossible for workers to connect with a supervisor or manager to have a say in their working conditions without fearing retaliation.

To properly enforce these recommendations, the state needs to develop transparent guidelines around safe, healthy, and realistic pace of work standards through the California Labor and Workforce Development Agency. Workload standards need to be based on the science of ergonomics, and set based on the capacity and needs of the human body, with the acknowledgement that every worker has a different capacity and body ability.

- **Ensure working conditions are within an ergonomic framework**

Workers' long-term health and well-being is dramatically impacted by workplace ergonomics. Injuries and harm to workers' bodies can have life-long consequences. The Federal Occupational Safety and Health Administration (OSHA) issued a letter of recommended measures to Amazon in 2015 to reduce or eliminate the ergonomic stressors that employees were exposed to at a New Jersey Amazon Fulfillment Center.³⁶ These recommendations included adding extra rest breaks to employees' schedules and rotating workers to different jobs throughout the day to lessen chronic ergonomic stressors.³⁶

In alignment with these OSHA recommendations, **we recommend that Amazon implement untimed and unlimited rest breaks to hydrate, wash hands, and use the restroom based on workers' needs**, for all warehouse workers and subcontracted delivery drivers without penalty or risk of dismissal. Employees also need better access to places to sit and rest. Chairs need to be available at all workstations so employees can easily access seating when needed. Additionally, employees need built-in recovery periods so those experiencing heat- and/or other forms of exhaustion are able to properly rest before safely resuming work.

To properly enforce these recommendations, California must sufficiently fund Cal/OSHA to hire and train inspectors to inspect workplaces, particularly those at greatest risk of violation of occupational safety and health standards — like Amazon.

- **Implement stronger COVID-19 precautions at all Amazon warehouses and for subcontracted delivery drivers, including unlimited time for hand washing, proper and regular sanitizing of workstations, and accessible restrooms for drivers**

Amazon's current warehouse policies and practices set the stage for the continued spread of COVID-19, and the company's lack of action both harms workers and

hinders the state's ability to stop the spread. As the California Occupational Safety & Health Standards Board (OSHSB) has moved forward with establishing emergency statewide standards to address the current occupational health emergency,³⁷ Amazon and all warehouses need to respond proactively to address the crisis by mandating unlimited time for hand washing, proper and regular sanitizing of workstations, and accessible restrooms for drivers.

Workers of color make up 66% of warehousing industry workers, with Latinx and Black workers — communities already experiencing higher rates of COVID-19³⁸ — employed in warehousing at twice the rate of all other industries.⁴ Thus, policymakers and state agencies should also acknowledge health precautions at warehouses as a critical component of mitigating race-based health inequities.

To properly enforce these recommendations, the state needs to strategize and implement a robust and effective integration and collaboration between Cal/OSHA and the Department of Public Health, to comprehensively address Amazon's workplace policies as a public health crisis and avoid redundancy.





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About Human Impact Partners

Human Impact Partners (HIP) transforms the field of public health to center equity and builds collective power with social justice movements.

If you have any questions about the research, please connect with:
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About Warehouse Worker Resource Center

[Warehouse Worker Resource Center \(WWRC\)](#) is a nonprofit, 501(c)(3) organization founded in 2011, dedicated to improving working conditions in the warehouse industry in Southern California. We focus on education, advocacy, and action to change poor working conditions in the largest hub of warehousing in the country.

We assist workers dealing with issues of health and safety, wage theft, and workers' compensation when injured. We also serve as a community center for workers, family members, and supporters interested in knowing their rights; joining with other workers to share experiences and learn from each other; and building a movement for workers' rights in the Inland Empire and throughout Southern California.

If you have any questions about worker advocacy and support, please connect with:

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References

1. Amazon. Investing in the U.S. About Amazon. Accessed November 5, 2020. <https://www.aboutamazon.com/investing-in-the-u-s>
2. Roosevelt M. Amazon's \$15 minimum wage gives a lift to California's vast warehouse region. *Los Angeles Times*. <https://www.latimes.com/business/la-fi-amazon-minimum-wage-20181002-story.html>. Published October 3, 2018. Accessed October 18, 2020.
3. Tung I, Berkowitz D. *Amazon's Disposable Workers: High Injury and Turnover Rates at Fulfillment Centers in California*. National Employment Law Project; 2020. Accessed October 18, 2020. <https://www.nelp.org/publication/amazons-disposable-workers-high-injury-turnover-rates-fulfillment-centers-california/>
4. Gutelius B, Theodore N. *The Future of Warehouse Work: Technological Change in the U.S. Logistics Industry*. UC Berkeley Center for Labor Research and Education and Working Partnerships USA; 2019:76.
5. Evans W. How Amazon hid its safety crisis. *Reveal from The Center for Investigative Reporting*. <https://www.revealnews.org/article/how-amazon-hid-its-safety-crisis/>. Published September 29, 2020. Accessed October 4, 2020.
6. What are injury rates like at Amazon warehouses? *Reveal*. Accessed October 4, 2020. <https://revealnews.org/article/amazon-injury-rates/>
7. Evans W. *Prime Labor: Dangerous Injuries at Amazon Warehouses*. *Reveal from The Center for Investigative Reporting*; 2019. Accessed May 19, 2020. <https://www.revealnews.org/article/behind-the-smiles/>
8. *Injuries, Illnesses, and Fatalities: Incidence Rates of Nonfatal Occupational Injuries and*

- Illnesses by Industry and Case Types*, 2018. Bureau of Labor Statistics, U.S. Department of Labor Accessed October 19, 2020.
https://www.bls.gov/iif/oshwc/osh/os/summ1_00_2018.htm
9. *Packaging Pain: Workplace Injuries in Amazon's Empire*.
 10. Bernard BP, ed. Musculoskeletal disorders and workplace factors. A critical review of epidemiologic evidence for work-related musculoskeletal disorders of the neck, upper extremity, and low back. *National Institute for Occupational Safety and Health, Center for Disease Control and Prevention, Public Health Service US Department of Health and Human Services*. Published online July 1, 1997. doi:10.26616/NIOSH PUB97141
 11. Koukoulaki T. The impact of lean production on musculoskeletal and psychosocial risks: An examination of sociotechnical trends over 20 years. *Applied Ergonomics*. 2014;45(2, Part A):198-212. doi:10.1016/j.apergo.2013.07.018
 12. Ohlsson K, Attewell R, Skerfving S. Self-reported symptoms in the neck and upper limbs of female assembly workers. Impact of length of employment, work pace, and selection. *Scand J Work Environ Health*. 1989;15(1):75-80. doi:10.5271/sjweh.1879
 13. Houtman IL, Bongers PM, Smulders PG, Kompier MA. Psychosocial stressors at work and musculoskeletal problems. *Scand J Work Environ Health*. 1994;20(2):139-145. doi:10.5271/sjweh.1419
 14. Guendelsberger E. *On the Clock: What Low-Wage Work Did to Me and How It Drives America Insane*.; 2018. Accessed April 16, 2020.
<https://www.littlebrown.com/titles/emily-guendelsberger/on-the-clock/9780316508995/>
 15. Brown HC. How Amazon's On-Site Emergency Care Endangers the Warehouse Workers It's Supposed to Protect. *The Intercept*.
<https://theintercept.com/2019/12/02/amazon-warehouse-workers-safety-cyber-monday/>. Published December 2, 2019. Accessed October 19, 2020.
 16. Joel Goh, Jeffrey Pfeffer, Stefanos A. Zenios. The Relationship Between Workplace Stressors and Mortality and Health Costs in the United States. *Management Science*. 2016;(2):608. doi:10.1287/mnsc.2014.2115
 17. Mayo Clinic Staff. Chronic stress puts your health at risk. Mayo Clinic. Published March 19, 2019. Accessed December 11, 2019.
<https://www.mayoclinic.org/healthy-lifestyle/stress-management/in-depth/stress/art-20046037>
 18. 'Colony of Hell': 911 Calls From Inside Amazon Warehouses. Accessed June 9, 2020.
<https://www.thedailybeast.com/amazon-the-shocking-911-calls-from-inside-its-warehouse-uses>
 19. *Amazon Warehouse Staff Survey Results*. Organise Platform; 2018.
 20. Dehydration - Symptoms and causes. Mayo Clinic. Accessed August 23, 2020.
<https://www.mayoclinic.org/diseases-conditions/dehydration/symptoms-causes/syc-20354086>
 21. CDC. How to Protect Yourself: Coronavirus Disease 2019 (COVID-19) – Prevention & Treatment. Centers for Disease Control and Prevention. Published November 4, 2020. Accessed November 5, 2020.
<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>
 22. Daniels M. "Fix it": Amazon workers demand protections as COVID-19 cases grow in Southern California facilities. *The Desert Sun*. Accessed August 23, 2020.

- <https://www.desertsun.com/story/money/business/2020/06/23/coronavirus-cases-amazon-continue-climb-workers-demand-protections/5245645002/>
23. Hussain S. Amazon warehouses in Hawthorne and Eastvale are fined for coronavirus safety violations. *Los Angeles Times*.
<https://www.latimes.com/business/story/2020-10-09/amazon-warehouses-in-southern-california-are-being-cited-by-cal-osh-a>. Published October 9, 2020. Accessed November 5, 2020.
 24. Romano B. Amazon's turnover rate amid pandemic is at least double the average for retail and warehousing industries. *The Seattle Times*.
<https://www.seattletimes.com/business/amazon/amazons-turnover-rate-amid-pandemic-is-at-least-double-the-average-for-retail-and-warehousing-industries/>. Published October 10, 2020. Accessed October 18, 2020.
 25. Barriers to employment for people with a disability : The Economics Daily: U.S. Bureau of Labor Statistics. Accessed October 19, 2020.
<https://www.bls.gov/opub/ted/2020/barriers-to-employment-for-people-with-a-disability.htm>
 26. Michaud P-C, Crimmins E, Hurd M. The Effect of Job Loss on Health: Evidence from Biomarkers. *Labour Econ*. 2016;41:194-203. doi:10.1016/j.labeco.2016.05.014
 27. Isaacs JB. The School Readiness of Poor Children. Published online 2012:22.
 28. Duncan GJ, Morris PA, Rodrigues C. Does Money Really Matter? Estimating Impacts of Family Income on Young Children's Achievement With Data From Random-Assignment Experiments. *Dev Psychol*. 2011;47(5):1263-1279. doi:10.1037/a0023875
 29. Reardon, Sean F. The Widening Income Achievement Gap. *Educational Leadership*. 2013;70(8):10-16.
 30. Chetty R, Stepner M, Abraham S, et al. The Association Between Income and Life Expectancy in the United States, 2001–2014. *JAMA*. 2016;315(16):1750-1766. doi:10.1001/jama.2016.4226
 31. Braveman PA, Cubbin C, Egerter S, Williams DR, Pamuk E. Socioeconomic disparities in health in the United States: what the patterns tell us. *American Journal of Public Health*. 2010;100(S1). Accessed April 11, 2013.
<http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2009.166082>
 32. Pleis JR, Lethbridge-Cejku M. Summary Health Statistics for U.S. Adults: National Health Interview Survey, 2006: (403882008-001). Published online 2007. doi:10.1037/e403882008-001
 33. Marmot MG, Bosma H, Hemingway H, Brunner E, Stansfeld S. Contribution of job control and other risk factors to social variations in coronary heart disease incidence. *The Lancet*. 1997;350(9073):235-239. doi:10.1016/S0140-6736(97)04244-X
 34. Karasek RA. Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign. *Administrative Science Quarterly*. 1979;24(2):285-308. doi:10.2307/2392498
 35. EU-OSHA. *Work-Related Musculoskeletal Disorders (MSDs) and the Pace of Work*. European Agency for Safety and Health at Work Accessed November 5, 2020.
<https://osha.europa.eu/en/publications/e-fact-15-work-related-musculoskeletal-disorders-msds-and-pace-work/view>
 36. U.S. Department of Labor Occupational Safety and Health Administration. OSHA Citation of New Jersey Amazon fulfillment center. Published online December 21,



2015. Accessed November 5, 2020.
<https://www.osha.gov/news/newsreleases/region3/01122016>
37. Zou JJ. Cal/OSHA will create emergency COVID workplace safety rules. *Los Angeles Times*.
<https://www.latimes.com/politics/story/2020-09-17/covid-19-cal-osha-workplace-safety-rules>. Published September 17, 2020. Accessed November 5, 2020.
38. Boyd RW. The Injustice of Inequitable Disease. In: *United States Congress House Committee on Energy and Commerce: Subcommittee on Health*. ; 2020:18.