The Future of Digital Care
Tackling the Costs of Physical and Emotional Pain in the Workplace
Resolve Chronic Pain: The Most Common Reason Employees Call In Sick

Thirty years ago, Garry had a serious motorcycle accident that resulted in terrible, chronic back pain. As a US Foods beverage chemical manager, Garry drove 3,000-plus miles a month, and this sedentary lifestyle only made his pain worse. For Garry and millions of Americans, musculoskeletal (MSK) pain interrupts both home and work life. Chronic MSK pain is the second most common reason for employees to call in sick, after the flu.¹

Every job type—from lifting heavy objects to sedentary computer work—can result in back and joint pain. Pain creates many costs for employers, including lost days at work, lower productivity, higher error rates, and increasing medical spend from expensive pain-related surgeries. Leading business and HR leaders are turning to digital musculoskeletal care as a scalable, convenient solution to tackle these high costs of pain.

Lasting pain relief for workforces across the nation

Taking a holistic approach to address a person’s unique physical and behavioral health needs, Hinge Health is the first and only comprehensive clinical care model that pairs advanced wearable technology with a full clinical care team.

Validated by researchers from the most rigorous U.S. academic institutions, Hinge Health’s digital musculoskeletal program sets the industry standard for everybody and every body part with dedicated programs across the musculoskeletal care continuum.

Hinge Health’s large-scale, two-year clinical outcomes published by researchers from Stanford and Vanderbilt² found:

- 69% average pain reduction per participant, four times better than opioids
- Depression and anxiety cut in half
- 62% improvement in work productivity
- Two out of three surgeries avoided
- Seven in 10 participants continued to do Hinge Health exercises two years later

US Foods, one of America’s largest foodservice distributors, with over 40,000 health plan members across 60 locations, partnered with Hinge Health. As a result, US Foods saw consistent outcomes with their employees, including Garry, who was able to finally live without crippling back pain. Watch Garry tell his story here.

Additionally, a US Foods three-year medical claims analysis demonstrated the following after implementation of Hinge Health:

- 50% decline in overall musculoskeletal claims
- 55% drop in back and joint surgery claims

This report takes a deeper dive into the impact of physical and emotional pain on your workforce and how US Foods implemented Hinge Health’s Digital MSK Clinic to tackle the costs of pain in the workplace.

THE HINGE HEALTH DIGITAL MUSCULOSKELETAL CLINIC

Four in five employers turn to Hinge Health for an end-to-end digital MSK solution proven to increase employee productivity while reducing pain, opioid use, and surgeries. Only Hinge Health pairs advanced wearable technology with a comprehensive clinical care team, including doctors of physical therapy, physicians, board-certified health coaches, and expert specialists. Available to millions, Hinge Health is the #1 Digital Musculoskeletal Clinic for health plans and employers, including Boeing, Salesforce, and Kraft Heinz.

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The Future of Digital Care
Tackling the Costs of Physical and Emotional Pain in the Workplace

Chronic back, neck, and joint pain afflicts millions of Americans and accounts for the largest share of U.S. health care expenditures. In 2016, spending on musculoskeletal disorders cost an estimated $380 billion, according to the Institute for Health Metrics and Evaluation. Physical pain, of course, also has a human cost in lost wages, reduced quality of life, and ultimately workers’ mental health. A comprehensive approach to treating chronic musculoskeletal pain by combining physical therapy with behavioral health and lifestyle changes creates lasting relief and helps employees avoid expensive surgeries and other medical interventions. It’s difficult, however, for people suffering from musculoskeletal pain to obtain coordinated treatment or get consistent support for following a treatment plan that keeps them healthy over time.

Employees and managers are acutely aware of the impact that chronic musculoskeletal pain has on individuals’ mental health and ability to work. And they want employers to do more to help their colleagues. According to a survey of 254 respondents by Harvard Business Review Analytic Services, 90% agree that when people experience chronic physical pain, they are more likely to be anxious or depressed, while a greater percentage concur that pain, both physical (93%) and mental (92%), takes a toll on people’s ability to be highly productive and engaged at work.
An overwhelming majority of respondents, including managers and employees in a wide range of industries, also agree that employers could step up their support for employees’ mental health needs (91%) and do more to assist employees who suffer from chronic physical pain (81%). FIGURE 1

These findings point to a gap in the health care benefits and wellness resources that are available to help employees treat their pain, whether to alleviate a chronic condition or to prevent one from developing. Digital health care solutions support virtual visits with providers, sensor technologies help patients complete their exercises at home, and tracking tools measure treatment progress. These digital solutions can make physical therapy, along with coaching to help patients make long-lasting behavioral changes, more accessible to more people, at a lower cost—and with better outcomes—than surgery and medication.

“Like most medical plans, our plan covered physical therapy appointments, which required deductibles, coinsurance, and copays,” says Joe Toniolo, senior director, health and welfare benefits with US Foods, a foodservice distributor with $28 billion in annual revenue. The company has offered a digital physical therapy, behavior coaching, and weight loss counseling benefit to employees with musculoskeletal pain since 2017. “We saw a valuable opportunity to remove these cost hurdles and make it easier for associates to gain access to these benefits—and protect their health and well-being at the same time.”

The US Foods program is free to participants and includes a tablet, wearable sensors to use while exercising, and physical therapy applications they can perform remotely anytime, anywhere. They also get unlimited access to a physical therapist and a health coach. “As many of our associates are on the road for their roles, it’s a valuable tool in supporting their treatment,” says Toniolo.

Employees appear eager for virtual health and wellness services: 84% of respondents to the Harvard Business Review Analytic Services survey agree that these are a good option for people to get the care they need. Enthusiasm for virtual care does not in itself guarantee uptake of any specific benefit, however. To ensure better health outcomes and savings, employers that adopt virtual treatment programs will need to educate employees and managers about these resources, and actively encourage their use.

The Burden of Chronic Back, Neck, and Joint Pain
Musculoskeletal conditions are a leading cause of disability around the world, with low back pain among those with the greatest impact on health and well-being, according to a December 2020 article in The Lancet. Public health researchers have found that over the past three decades, as the global population has expanded and aged, the prevalence of low back pain, neck pain, and other joint-related conditions grew on average 62%, while the burden of these conditions, as measured by years living with disability, has also increased.

In the United States, chronic back and neck pain result in the most lost workdays and cost more to productivity than any other condition.1 People afflicted with back, neck, or joint pain often suffer from other chronic disorders including depression, heart disease, obesity, and diabetes, which influence their pain and increase the impact of their chronic condition.2

The pandemic has made things worse for these patients. Working from home has exacerbated some employees’ pain, an August 2020 study in the International Journal of Environmental Research and Public Health found. As the Covid-19 pandemic subsides, workers will return to their offices (and their ergonomically correct workstations) in greater numbers. But it is also likely that 25% to 30% of the workforce will continue to work from home at least some of the time, finds Global Workplace Analytics in its “Work at Home After Covid-19” forecast, raising the possibility that

FIGURE 1
Pain versus Productivity
Respondents want employers to do more for colleagues who are in pain
Rate the extent to which you agree or disagree with the following statements.

<table>
<thead>
<tr>
<th>Agree strongly/somewhat</th>
<th>Disagree strongly/somewhat</th>
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<tbody>
<tr>
<td>93%</td>
<td>5%</td>
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<tr>
<td>When people suffer from chronic physical pain, it’s difficult for them to be highly productive and engaged at work</td>
<td></td>
</tr>
<tr>
<td>92</td>
<td>6</td>
</tr>
<tr>
<td>When people suffer from mental pain, it’s difficult for them to be highly productive and engaged at work</td>
<td></td>
</tr>
<tr>
<td>91</td>
<td>5</td>
</tr>
<tr>
<td>Employers today could do more to support employees with mental health needs</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>8</td>
</tr>
<tr>
<td>When people are frequently in physical pain, they are more likely to be anxious or depressed</td>
<td></td>
</tr>
<tr>
<td>81</td>
<td>9</td>
</tr>
<tr>
<td>Employers today could do more to support employees experiencing chronic physical pain</td>
<td></td>
</tr>
</tbody>
</table>

Source: Harvard Business Review Analytic Services Survey, November 2020
more people could develop chronic musculoskeletal pain or aggravate existing conditions.

For most patients, non-medical interventions such as physical therapy, psychological counseling, and behavioral or lifestyle changes—including in combination—are not only effective at relieving pain but cost effective, as well. “A lot of people have back pain caused by problems not curable by surgery, or that will resolve themselves if you wait long enough,” observes Daniel Cherkin, senior investigator emeritus with the Kaiser Permanente Washington Health Research Institute, who has studied non-medical treatments for back pain.

What helps these patients get better: exercise, such as provided by physical therapy, and mind-body interventions. “The most striking development in our knowledge about how to deal with back pain and other pain is understanding of the importance of psychological and social factors,” adds Cherkin. He and his colleagues tested mindfulness-based stress reduction and cognitive behavioral therapy with patients suffering from chronic low back pain. Their study, published in *JAMA* in March 2016, found that patients who received mind-body therapies along with their usual medical care had less pain, fewer physical limitations, and improved mental health compared with patients who did not receive those therapies. In addition, these interventions were cost effective when taking into account health care costs, employee productivity, and patient quality of life measures, according to a 2017 study in *Spine*.

Furthermore, behavior changes—including quitting smoking, losing weight, and improving nutrition—have been found to improve bone health, reduce chronic musculoskeletal pain, and reduce the risk from other chronic diseases, according to a 2015 study published in *BMC Musculoskeletal Disorders*.

At US Foods, low back and knee pain are common medical concerns among employees. “Mental health is a key component of our approach,” says Toniolo, because employees who are able to treat their pain successfully find that their mental health also improves. “We know when associates seek and receive proper medical treatment, particularly early on, not only are they investing in their long-term health and well-being, but there are positive benefits for our business.”

**Expanding Availability of Chronic Pain Care**

A comprehensive program for treating musculoskeletal pain can provide care in every dimension: exercise therapy, mental health counseling, and coaching to help patients establish healthier behaviors. “We have practitioners and clinicians of different backgrounds, and our philosophy and approach to treatment is that we work together,” says Joseph Audette, a physiatrist, chief of the department of physiatry, spine, and pain management at Massachusetts-based Atrius Health, and an assistant professor at Harvard Medical School.

Patients who are referred to Atrius Health’s integrated spine program may have become dependent on medication or spinal injections; they may have tried physical therapy, “but not while doing other things that would help,” says Audette. Clinicians will restart the physical therapy but combine it with counseling, mindfulness training, and additional alternative treatments.

Audette observes that his patients are able to reduce their dependence on doctors and medication to relieve their pain because they learn how to manage it themselves. “They’re not utilizing health care services as they otherwise would do to an excessive degree.”

Even though clinical guidelines for treating chronic back and neck pain endorse exercise and psychological or behavioral interventions before medication and surgery, that doesn’t mean patients have access to the preferred therapies. *The Lancet* reported that in the United States, more people have low back pain than any other health condition that requires physical rehabilitation, yet according to a June 2020 position paper by the American Physical Therapy Association, the nation faces an estimated shortage of more than 26,000 physical therapists nationwide by 2025, especially in rural and medically underserved areas.

When patients can get physical therapy and related rehabilitative services, they don’t always take advantage of them. The Harvard Business Review Analytic Services survey found that 60% of respondents are aware that traditional physical therapy and other physical pain/injury treatments are available as health care benefits at their organization. But people may balk at any out-of-pocket costs; they may also find it difficult to schedule in-person appointments around their
work or family responsibilities. As a result, some patients end up seeking care only after they have been hurting for many months, and they may be depressed, observes Louis Dickey, medical director of the health management practice at Willis Towers Watson, a business advisory service. At that point, he says, “many are looking for a quick solution.”

Typically, that solution means they get a prescription, or they wind up having an expensive surgery—back surgery may cost anywhere from $50,000 to $150,000 (the bulk of which is typically paid by insurance), according to estimates by CostHelper Health. “Patients don’t get a chance to try another approach, and they can get pretty stuck,” says Audette. “Maybe if earlier on they were exposed to other options before their symptoms became so chronic, they would have more of an idea that lifestyle changes, or an attitude difference, or a certain exercise” could provide relief.

Digital care shows promise to expand access to comprehensive care, improve patient outcomes, and reduce costs to both patients and employers. To begin, virtual physical therapy is just as effective as in-person treatment, if not more so, for improving physical function and relieving pain.1 Because patients do not have to travel to an appointment, their physical therapist and other care providers can be located anywhere. If patients use wearable sensors that monitor how they perform their exercises, they can get instant feedback as to whether they are doing them correctly. Smartphone apps can also track patients’ progress.

US Foods’ program offering video physical therapy appointments, behavior coaching, education, and weight loss counseling has saved money on health care costs, reduced absenteeism, and increased productivity. To date, more than 600 employees have participated in the program—more than the company anticipated.

Among these employees, spending on care for back and neck pain declined more than 50% on average, while spending on invasive surgeries declined more than 55%, compared to employees with musculoskeletal conditions who did not participate (medical claims and surgeries for the latter group rose, in fact). Participants were also healthier and more productive. Not only did they report less pain, increased range of motion, and improved strength, they also reported getting better sleep, used less medication, and had fewer absences from work or days with diminished performance.

According to a JAMA research letter published in November 2020, virtual office visits offset two-thirds of the decline in in-person visits to health care providers during the first half of that year.

However, the technology-enabled care that is offered appears focused on the most basic benefits. Harvard Business Review Analytic Services presented its survey respondents with a list of 10 common health and wellness benefits and asked them to select those they are aware that their employers offer. As anticipated, respondents cited in-person office visits with their health care providers (86%) and mental health counseling (82%) most often, followed by health screenings (72%), physical therapy (60%), management of a chronic illness (57%), smoking cessation or substance abuse treatment (56%), stress reduction (50%), nutrition counseling or management (45%), and fitness classes or personal training (44%).

The survey then asked respondents to select the benefits they are aware they can access virtually. Office visits (77%) and mental health counseling (68%) topped the responses to this question, as well. Beyond these basics, fewer than half of respondents indicated awareness of mobile apps, apps with sensor technology, video calls, or a website they could use to access more specialized benefits, such as stress reduction (43%), fitness classes or personal training (34%), nutrition counseling or management (34%), health screenings (28%), smoking cessation or substance abuse treatment (28%), and physical therapy (15%). The gap in awareness about the availability of in-person physical therapy and virtual physical therapy is the largest of any benefit category: 45 percentage points. FIGURE 2

The gaps between in-person and virtual care, combined with demand for more virtual care options, suggest extensive opportunities for employers to take virtual care to the next level, and in doing so, to improve the benefits available to address the pressing problem of musculoskeletal pain among workers. Respondents indicated they would like virtual health

Digital Solutions: The Next Level of Pain Care

As a result of Covid-19, awareness and use of technology-enabled health care options have increased in the past year. Sixty-five percent of respondents to the Harvard Business Review Analytic Services survey say their employers had expanded virtual health care benefits during the pandemic.
The gap in awareness about the availability of in-person physical therapy and virtual physical therapy is the largest of any benefit category: 45 percentage points.
and wellness resources expanded in every category asked about. Notably, the demand for expanded virtual physical therapy (19%), is about equal to the reported awareness of this resource. This finding, along with the observed awareness gap between in-person and virtual physical therapy offerings, suggests there is potential interest in digital programs to address chronic back, neck, and joint pain.

Sharing Information to Improve Back, Neck, and Joint Health

Employers have significant influence over whether their employees get the right care for their pain. They also have an incentive to ensure care is delivered. “Employers are concerned about two things: keeping productivity up and limiting medical expenses,” says Kaiser Permanente’s Cherkin. They can accomplish both aims by offering benefits that provide cost-effective treatment and encouraging employees to choose these over “less helpful and/or less safe” options that are nevertheless “part and parcel of standard medicine,” he adds.

More than two-thirds of survey respondents (69%) believe that their organization is open to new ideas for benefits and resources to address employees’ common health concerns. Dickey, of Willis Towers Watson, believes that for musculoskeletal care especially, employers are becoming more interested in innovative options like virtual care to proactively address their employees’ needs and hopefully avoid an increase in claims for surgery among employees who postponed elective procedures during the pandemic or whose pain is worse because they have been sitting at home more and moving around less.

It’s one thing to roll out a new benefit, and another for employees to remember it when they decide to seek care and choose it over more familiar options. Primary care doctors and patients alike still view surgery or medication as go-to solutions, says Dickey. Patients are “seeing their primary care physician, or the orthopedist, and rarely will the providers they are directly interfacing with say, ‘have you thought about the digital solutions?’” Business leaders may need to develop more targeted and more innovative approaches in their communications with employees and managers, and create an environment where information about treatment options for pain can be shared proactively by managers with their teams.

According to the survey, many employees may suffer in silence: 28% of respondents agree that talking about chronic physical pain at work is taboo, while 40% answer similarly concerning mental pain. However, even in companies where people are able to talk openly about their health, managers may not know someone on their team is in pain: 81% of managers surveyed by Harvard Business Review Analytic Services say it’s difficult to know if an employee needs help for a chronic condition. “It may not even come to the manager’s attention unless the individual is starting to miss work,” Dickey says. Figure 3

If managers become aware that their team members need help, most know what to do. Eighty-two percent said they know who to ask when an employee needs an accommodation for a health condition, 80% are able to direct team members to information about their benefits, and 76% know—or know

*Source: Harvard Business Review Analytic Services Survey, November 2020*
According to the survey, many employees may suffer in silence: Nearly one in three respondents say it’s taboo to talk about chronic pain at work.

**FIGURE 3**

**In the Dark About Employees’ Pain**

Most managers find it difficult to know whether a team member needs help

Rate the extent to which you agree or disagree with the following statement.

- Somewhat disagree/strongly disagree
- Somewhat agree/strongly agree

11% 81%

It’s difficult to know if an employee needs support for a chronic condition

Source: Harvard Business Review Analytic Services Survey, November 2020

how to find out—about company policies concerning leave due to illness or disability. However, it appears they are less likely to be able to take the initiative on behalf of their teams as a whole. The majority (53%) do not consider themselves to be highly empowered to prioritize the health and well-being of their teams, for instance, by giving comp days, ordering ergonomic office equipment or furniture, or scheduling stress reduction classes (e.g., for anyone selecting a seven or lower on a 10-point scale).

“This is where we get a little fracturing of the system, because what happens at work really falls into workers’ comp, which falls into the safety and risk area,” says Dickey. In most companies, managers are held accountable for preventing workplace injuries, but not for how their teams use their medical benefits (which may not be work-related). The two functions, safety and benefits, are siloed.

“At the end of the day, they all roll up to a cost to the company and an impact on productivity,” but “they’re not looking at it holistically.” He suggests one solution is for C-level executives, such as the CFO, to foster greater collaboration between benefits and safety teams in their work with team leaders. At US Foods, such a partnership promotes proper ergonomics, so workers learn to prevent the development of back, neck, and joint pain.

Companies may also need to step up their efforts to educate employees about their benefits. The majority of survey respondents report that their organization typically communicates with them about their health and wellness benefits and resources episodically: 71% hear when something changes, and 52% when there is an event such as a class, benefits fair, or health screening. Fewer than half (48%) say they get regular communications from the benefits team. **FIGURE 4**

Toniolo suggests business leaders “embrace innovation and leverage a ‘shock the system’ approach” to communicating about new benefits programs. US Foods has more than 70 locations. Engaging employees about their health benefits is challenging, in part because it’s difficult to know whether employees read all the marketing materials that the benefits team disseminates.

The company had already rolled out a suite of telehealth and application-based benefits, and it was learning to be creative. To promote the musculoskeletal treatment program, Toniolo’s team designed a blitz to reach employees in multiple ways. They mailed brochures to employees’ homes and sent them email; they put up posters and installed digital signage at work sites. The messages focused on how employees could avoid surgery, reduce their pain, lose weight, and “get back to their favorite activities.”

**FIGURE 4**

**Benefits Communications Are Episodic**

Most respondents do not get regular communications about health and wellness resources

When does your organization typically communicate about the health and wellness resources/benefits available to employees? [SELECT ALL THAT APPLY]

- 71% Anytime health and wellness benefits are changed or added
- 52% When there’s a health- and wellness-related event (e.g., an onsite class, benefits fair, health screening, etc.)
- 48% Regularly (such as monthly or quarterly) via communications from HR/the benefits team
- 8% None of the above
- 3% Don’t know

Source: Harvard Business Review Analytic Services Survey, November 2020
In addition, the benefits team offered webinars about the program. “Wellness champions” put flyers on the steering wheels of drivers’ trucks. Managers also spread the word. “Helping associates learn about and take advantage of the resources available to them is something that our managers take very seriously,” says Toniolo. Employees were initially skeptical of one selling point—that participating would not cost them anything. Testimonials from associates who had been through the program helped reinforce the no-cost message as well as the other benefits. One veteran employee described how the worsening pain from a years-ago motorcycle accident was affecting his mobility; he reduced his pain significantly, recovered his strength, and was able to avoid surgery.

Benefits for a Happier, More Productive Workforce

The expansion of technology-enabled benefits during the Covid-19 pandemic can be a catalyst for supporting employees with additional digital care options that prevent and treat musculoskeletal pain.

While it may not be apparent to managers why employees are suffering, business leaders who delve into their medical claims are likely to find that treatment for chronic musculoskeletal pain is not only prevalent, but costly. Yet spending on surgeries tells only part of the story. Before their pain becomes so intolerable that employees go under the knife, they may also become anxious or depressed. They miss work, or their physical and mental pain diminishes their performance on the job. Though the impact of employee pain on productivity is harder to quantify within a company, Dickey says business leaders understand it is a factor in their costs.

Comprehensive preventive care and treatment that includes exercise, mind-body therapies, and psychological or behavioral counseling enables many people to reduce their pain, recover mobility, improve their mental health, and develop better habits over the long run without medication or expensive surgery. However, out-of-pocket costs and the inconvenience of scheduling appointments may deter patients from seeking this more conservative care while it can help, assuming it is available, and they are aware it is an option.

Digital care can help to clear these hurdles. Audette, the physiatrist, observes that in a clinical setting, virtual physical therapy “would be a great way to work with patients without having to make them go to physical therapy,” using sensor-equipped devices to follow their progress. “I would say we’re not utilizing that to its full extent.” Meanwhile, companies have begun to adopt digital care solutions, as US Foods has done, to deliver physical therapy and complimentary care remotely.

Companies will need to invest in educating employees about such options, so they remember to choose them when they need help. Because so many people have participated in telehealth appointments for consultations during the pandemic, Dickey thinks they will be increasingly open to virtual care for chronic conditions, such as treating their back, neck, or joint pain, as well. “The Covid-19 pandemic has opened a lot of people’s eyes about the value of virtual care,” he concludes. “It’s going to become more of the norm versus the exception, because people have gotten a lot more comfortable doing it.”

Endnotes

A total of 254 respondents drawn from the HBR audience of readers (magazine/newsletter readers, customers, HBR.org users) completed the survey. All respondents were based in the United States.

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<thead>
<tr>
<th>Size of Organization</th>
<th>Seniority</th>
<th>Key Industry Sectors</th>
<th>Job Function</th>
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</thead>
<tbody>
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<td>25% 10,000 or more employees</td>
<td>19% Executive management/board members</td>
<td>16% Health care</td>
<td>20% General/executive management</td>
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<tr>
<td>26% 1,000 – 9,999 employees</td>
<td>36% Senior management</td>
<td>10% Government/not-for-profit</td>
<td>10% HR/training</td>
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<td>18% 100 – 499 employees</td>
<td>18% Other grades</td>
<td>9% Manufacturing</td>
<td>9% Consulting</td>
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<tr>
<td>20% Fewer than 100 employees</td>
<td></td>
<td>8% Financial services</td>
<td>8% Sales/business development/customer service</td>
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All other sectors less than 8% each

Figures may not add up to 100% due to rounding.
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