

## Are Your Passwords in the Green?

Since 2020, Hive Systems has **been on a mission to crack the code—literally—on passwords.** Their **Hive Systems Password Table** shows just how fast a hacker can brute-force your password... but what you see in the table is just the tip of the iceberg.

### What is Brute Force?

A brute-force attack is when an attacker uses a set of predefined values to attack a target and analyze the response until they succeed. As you explore how to brute-force a password, remember that success depends on the size of the set of predefined values. If it is larger, it will take more time, but there is a better probability of success.

The most common—and simple—example of a brute-force attack is a dictionary attack. With this method, the attacker uses a password dictionary that contains millions of password options. The attacker tries these passwords one by one in successive attempts to satisfy the system's authentication requirements. The attacker will succeed if the dictionary of options contains the correct password.

In a traditional brute-force attack, the attacker just tries a combination of letters and numbers to generate a password sequentially. However, this traditional technique will take much longer, especially with long passwords. These attacks can take several minutes to several hours or years, depending on the system used and the length of the password.

**What if my password has been previously stolen, uses simple words, or I reuse it between sites?"**

The Hive Systems password table focuses on the idea that the hacker is working in a "black box" situation and is having to start from scratch to crack your hash to show the "worst case" or "maximum time required." Most hackers will prioritize which words and strings of characters they'll work on first through rainbow tables, dictionary attacks, and previously stolen hashes.

***If your password was part of another breach or uses dictionary words, then your password table looks like this:***

Number of Characters	Numbers Only	Lowercase Letters	Upper and Lowercase Letters	Numbers, Upper and Lowercase Letters	Numbers, Upper and Lowercase Letters, Symbols
4	Instantly	Instantly	Instantly	Instantly	Instantly
5	Instantly	Instantly	Instantly	Instantly	Instantly
6	Instantly	Instantly	Instantly	Instantly	Instantly
7	Instantly	Instantly	Instantly	Instantly	Instantly
8	Instantly	Instantly	Instantly	Instantly	Instantly
9	Instantly	Instantly	Instantly	Instantly	Instantly
10	Instantly	Instantly	Instantly	Instantly	Instantly
11	Instantly	Instantly	Instantly	Instantly	Instantly
12	Instantly	Instantly	Instantly	Instantly	Instantly
13	Instantly	Instantly	Instantly	Instantly	Instantly
14	Instantly	Instantly	Instantly	Instantly	Instantly
15	Instantly	Instantly	Instantly	Instantly	Instantly
16	Instantly	Instantly	Instantly	Instantly	Instantly
17	Instantly	Instantly	Instantly	Instantly	Instantly
18	Instantly	Instantly	Instantly	Instantly	Instantly

### BEST PRACTICES:

Strong password practices involve creating unique, lengthy passwords, ideally using passphrases or random character strings, and avoiding easily guessable information or common words. Unique passwords for each account are crucial, and password managers can help with storage and generation. Furthermore, enabling two-factor authentication adds an extra layer of security.

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# Letter from the Editor



Pam Snell,  
DMS Advocate

## ***Hello May!***

As flowers bloom and spring is in full swing, it's the perfect time to do a little digital gardening—starting with your passwords! Just like weeds in a garden, old, weak, or reused passwords can choke your security. (ChatGPT wrote this; what do you think?)

Once again, Hive Systems has published their Password Chart of how long it would take for a hacker to breach your password. We get so many comments from clients and friends that they love this chart!

This year, I've done a little more explaining about the hacker process and what they hope to gain. I hope you find it interesting, too.

If you are a client, you know that we use a cybersecurity tool called "Huntress" that monitors every system that we control. In researching for the front page article, I made a folder called "*Password Chart*."

Huntress reported to Beth that I had a folder of passwords, which is a big NO NO. If I really had a folder of my passwords, it would be easy for a hacker to steal the "keys to my kingdom" and open every password-protected account that I have!

When Huntress finds folders or documents that contain passwords, Beth immediately reaches out and advises them to get a password manager to keep those passwords secure.

Huntress also performs important proactive roles. Recently, Huntress isolated a few of our clients' systems when they have clicked on an infected link. Huntress contacts us right away so we can help respond to and fix the issue.

In each breach, this link has been from a trusted source (who didn't know that they had been breached) and Huntress' intervention has kept the hacker from getting into any other computers or their network. It's a superhero in our books!

You can be a superhero, too. If you'd like to share this article with your team, friends, family, or anyone else, you can get it at [www.ACTSmartIT.com/green](http://www.ACTSmartIT.com/green)

You may also want to check out May's Infographic, "Celebrating World Password Day (May 1, but we're celebrating for the whole month!). There are 4 Pop Quizzes that are funny and fun. See how you do. (<https://ACTSmartIT.com/world-password-day/>)

*(Wishing you a month full of sunshine, smart clicks, and smooth sailing—until next time, stay safe and savvy!)*

Thanks, ChatGPT, I'll take it from here!

## ***Happy May!***

A stylized, handwritten signature in black ink, consisting of a large 'P' followed by a checkmark-like flourish.

• **Length is Key:** While complexity was previously emphasized, current best practices prioritize password length, with NIST recommending up to 64 characters.

- **Passphrases or Random Strings:** Create memorable phrases of 4-7 random words (passphrase) or use a mix of uppercase, lowercase, numbers, and symbols (random string).
- **Avoid Personal Information:** Do not include birthdays, names, or other easily guessable information in passwords.
- **Unique Passwords:** Use different passwords for each account to prevent a breach from affecting other accounts.
- **Password Managers:** Password managers can store and generate unique, strong passwords, making it easier to manage numerous accounts.
- **Two-Factor Authentication:** Enable two-factor authentication (MFA) whenever possible for added security.

- **Don't Reuse Passwords:** Avoid reusing the same password for multiple accounts.
- **Be Aware of Surroundings:** Be cautious when entering passwords in public, especially on public Wi-Fi.

ACTSmart IT has been sharing The Hive Systems' Password Table since it was first conceived in 2020.

It's a great tool to get users to think about password security, and to, hopefully, react with stronger passwords and other stronger security measures.

#### Resources:

<https://www.hivesystems.com/blog/are-your-passwords-in-the-green>

<https://www.infosecinstitute.com/resources/hacking/popular-tools-for-brute-force-attack/>

<https://www.ACTSmartIT.com/green>

Number of Characters	Numbers Only	Lowercase Letters	Upper and Lowercase Letters	Numbers, Upper and Lowercase Letters	Numbers, Upper and Lowercase Letters, Symbols
4	Instantly	Instantly	Instantly	Instantly	Instantly
5	Instantly	Instantly	57 minutes	2 hours	4 hours
6	Instantly	46 minutes	2 days	6 days	2 weeks
7	Instantly	20 hours	4 months	1 year	2 years
8	Instantly	3 weeks	15 years	62 years	164 years
9	2 hours	2 years	791 years	3k years	11k years
10	1 day	40 years	41k years	238k years	803k years
11	1 weeks	1k years	2m years	14m years	56m years
12	3 months	27k years	111m years	917m years	3bn years
13	3 years	705k years	5bn years	56bn years	275bn years
14	28 years	18m years	300bn years	3tn years	19tn years
15	284 years	477m years	15tn years	218tn years	1qd years
16	2k years	12bn years	812tn years	13qd years	94qd years
17	28k years	322bn years	42qd years	840qd years	6qn years
18	284k years	8tn years	2qn years	52qn years	463qn years

**Time it takes  
a hacker to  
brute force  
your password  
in 2025**

Hardware: 12 x RTX 5090  
Password hash: bcrypt (10)



**Hive Systems**

Read more and download at  
[hivesystems.com/password](https://hivesystems.com/password)



# Your Reputation Matters

Many of our clients think a lot about their reputation with patients, but few spend any substantive time considering their reputation as an employer. Beyond that, very few develop a strategy to actively work on "improving" their reputation as an employer. This is a lost opportunity, as this process doesn't cost anything but the time and effort needed to accomplish it.

As a private professional recruiter, what we have learned from dental industry clients in the New England area is this:

***"It's a small world, and word of an employer with unattractive offerings, policies, and management practices gets around."***

Your employment brand is targeted towards candidates and employees, similar to your dental practice's marketing brand, which is targeted towards patients. What you can do to develop your employer brand is:

- Ensure you take active steps to cultivate a positive workplace culture with growth opportunities for your staff.
- Conduct a market analysis yourself, or have a third-party recruiting firm conduct an analysis by position to ensure you are competitive with the current market.

- Declare what your culture, mission, vision and values are.
- Market what you offer to potential candidates.
- Ensure your employee testimonials are visible.
- Sell yourself to the labor market such that candidates feel compelled to join your team.

It takes time to implement a marketing plan for your practice to increase patient flow. It also takes time, and deliberate effort to increase applicant flow. Increased applicant flow will make your job of hiring and retaining staff that much easier. The goal is to select from the largest pool of candidates.

The goal when recruiting is also to screen people "in" not "out." Many times, clients will screen out very good potentials who may have a unique or different background than what the client had in their mind for background. When looking at a candidate, see the potential in them, not the reason for excluding them from consideration. Far too many candidates are screened out, without good cause.

This is something you can do internally. Get help if you need a employment brand marketing plan designed, but start today!! Your employment brand will ultimately determine just how many candidates you get to choose from when you have a vacancy.



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# The Responsibilities of a Dental Director

The Massachusetts Dental Regulations require specifically in 234 CMR 5.02(3) that "The owner(s) of a dental practice where any non-owner practices dentistry shall designate a dentist who holds a valid license pursuant to M.G.L. c. 112 Sec. 45 to act as Dental Director."

That means that essentially whenever a dental practice has an associate who isn't an owner, one licensed dentist must be named to have overall responsibility for supervision of the practice to ensure that dental regulations and other laws are met, and thus in essence formally supervises the non-owner associates.

With the increasing trend towards employment of younger dentists or associates who are just getting involved in practices until they may in the future become owners, or working just as employees of corporate dental practices to earn a salary, this requirement more often comes into play. Also, if a non-dentist owner is involved in the ownership of a practice, a Dental Director must be named.

## ***So what are the responsibilities of the designated Dental Director?***

First, the name of the Dental Director must be posted at a practice in a notice patients can see easily at the office. The Dental Director is responsible for the implementation of policies and procedures that will ensure compliance with local ordinances and state and federal regulations having to do with the practice of dentistry. Examples of the numerous statutes and regulations involved are listed in the Dental Regulations, though it is noted that it is not an exclusive list.

Below are the eleven regulations specifically mentioned in the Regulations:

- Licensure and qualifications of dentists and dental auxiliaries.
- Delegation of duties to dental auxiliaries pursuant to 234 CMR 2.00.
- Anesthesia administration as permitted by the Board.

- State and federal controlled substances rules and regulations.
- CDC Guidelines, including weekly spore testing.
- OSHA standards.
- Radiation control requirements.
- Posting dental licenses in the practice,
- Advertising dental services or fees.
- Schedule of equipment and drugs to ensure timely inspections, maintenance, and current drugs.
- Compliance with applicable local, state, and federal regulations and statutes, including but not limited to occupancy codes, fire safety codes, and disposal of hazardous waste.

The Regulations make it clear the Dental Director's responsibilities for ensuring that all these regulations are complied with does not absolve any dentist, owner, or other licensed dentist from responsibility for complying with all the regulations.

It establishes, however, someone who the Board or federal agency such as OSHA or the CDC can go to in case there is a complaint of a violation by anyone in the practice. Normally that would be the owner, but if an associate or employee who is a non-owner is treating patients, someone with the Dental Director position has that responsibility. The owner can be the Dental Director also. When a dental practice incorporates state documents require at least one licensed dentist to be named by the Board.

In some states, patients who claim poor treatment by corporate dental practices have filed lawsuits when the dentist who is named to the position of a licensed dentist in charge of multiple practices is actually located off-site. The control of the treatment of patients has been determined in these cases to be too much subject to goals of profit versus quality of dentistry. The Dental Director, if on-site, can prevent this situation from happening.



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# *I found a practice to buy...now what?*

When you are buying a new home, a home inspection is helpful to ensure that you fully understand the things you don't have the expertise to evaluate. When buying your dental "home," the same principles apply. You get the facts and figures from the broker or buyer, but what about the things you can't see? That's where a seasoned dental buyer representative comes in.

## **How do you find the right buyer representative?**

**Look for a representative with experience** specifically in the dental field and someone who has a background in this specialized service. A representative with a strong understanding of dental practice valuation, financing, geographic region, and industry standards is key.

**Check references and review the representative's past transactions.** A representative with a proven track record will have the experience and network of professionals needed to guide you effectively.

**Ensure that the representative has clear communication skills** and is responsive to your needs. They should be able to explain complex terms and processes in a way that makes sense to you.

**Dental transactions can be sensitive.** Ensure that the representative values confidentiality and will protect your interests throughout the transaction.

## **What services will a buyer representative provide?**

**Dental buyer reps often have access to a wide network of practice brokers.** They take the time to understand the buyer's needs and preferences and then help them search for practices that match those criteria.



**Before purchasing, the buyer representative can help evaluate the practice.** This includes reviewing financial statements, conducting a cash flow analysis, and performing a deep dive into the practice management software. This provides the buyer with the information needed to identify potential liabilities or risks.

**After the sale, a dental buyer representative may help with the transition process,** ensuring that the new owner has the support they need to successfully take over the practice, including staff management, patient-retention strategies, and operational advice.

A dental buyer representative is an invaluable resource for anyone looking to purchase a dental practice. From helping find the right practice to facilitating the transition, these professionals offer expert guidance and support throughout the entire process.

Working with a dental buyer rep ensures that you have someone on your side, helping you navigate the complexities of dental practice acquisitions and ensuring that you make an informed and successful investment in your future.



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# Better Writing: TYPO Traumas

Are you familiar with the word *typo*? It's often used to indicate that something we typed or wrote is wrong.

As an editor, I use the term to point out errors, finding after all these years that most folks don't mind it as much as my saying "You goofed" or "You made a mistake."

My favorite way of helping in this regard is just saying or writing: "I saw a couple of typos."

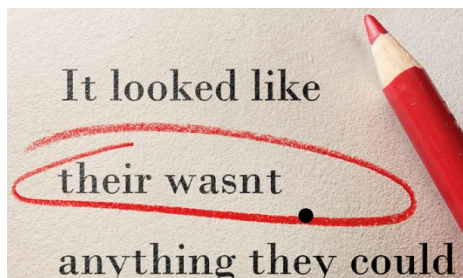
Today, let's talk about the most common type of typo: using the wrong word and not seeing it.

Why don't we see it?

Well, first of all, many of us depend on an excellent "helper" called spellcheck, without realizing or remembering that it only does one thing: It checks spelling – not usage.

**See what it did above?** I mistyped two words, and spellcheck underlined them in red.

That's a huge help when we do something so obvious, right?



But.

What happens when/wen we/wee/whee use a word that sounds like the one/won we mean and don't even realize that there/they're/their could be/bee more/moor than one of them

that sounds the same?

These terms are called **homophones**, words that sound alike but are spelled differently and have a different meaning. They can really play havoc in our writing if we're not focusing on them!

So, how do we keep our thoughts safe and strong with the right words?

**1. Pay attention to whatever grammar checker** comes with your writing program. While not one of them is perfect, they're still good at catching obvious (to them) goofs, which will cut down on what you have to do manually.

**2. Use the search function** to check on homophones like affect/effect, it's/its (there's no such word as *its*), you're/your/yore, to/too/two – whatever words you often mistype (or just aren't sure of). Ask the search function to find them one by one, and look carefully to see if you've used the right one. Then do it with the other one in the pair (or triplet).

And if you sometimes use the word **public**, search for **pubic**, which is a perfectly good word but probably not the one you meant, to make sure it's not hiding out somewhere.

**PRO TIP:** Always check for the word you **DON'T** want in those circumstances.

**3. Make a list of the words** you most often get confused about and keep it handy.

And if you're on LinkedIn, do follow **Sara Rosinsky** (<https://www.linkedin.com/in/sararosinsky/>) because she publishes a post almost every day (with humor and insights) about difficult word usage.

**Next month's article** here will include a quiz on homophones (with the answers).

**Grammar Goddess Communication**

I will help you look and sound as smart as you are.



**Editing / Proofreading of**

**Annual Reports — Blogs — Business / Nonfiction  
Books — Podcast Transcriptions — Websites**

**Never ask: How smart is that person?  
Always ask: How IS that person smart?**



## May 2025—In This Issue:

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*This newsletter was thoughtfully edited by Susan Rooks, the Grammar Goddess, so we can look and sound as smart as we are.*



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The Grammar Goddess

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