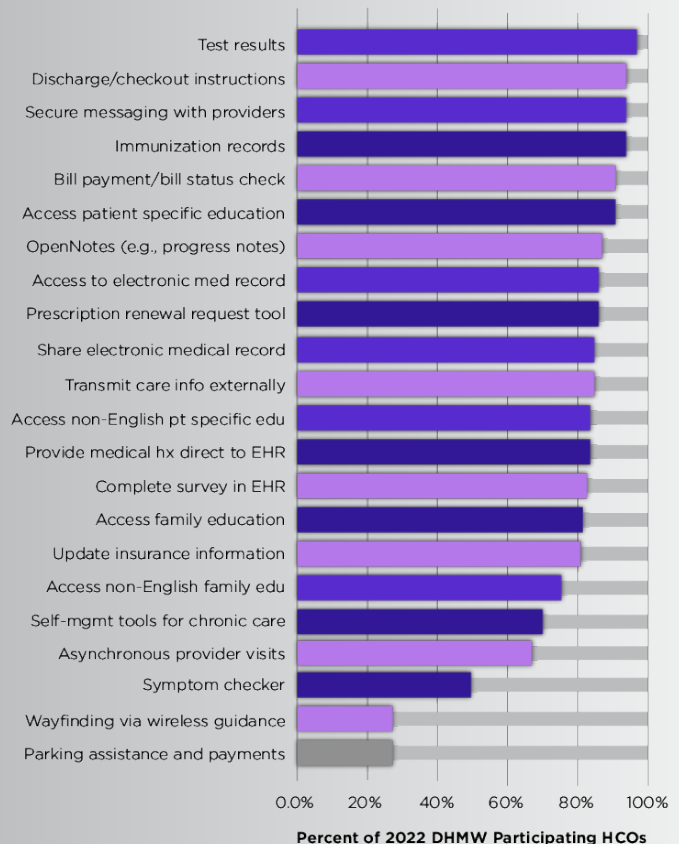# MEASURING THE EFFECTIVENESS OF PATIENT EMPOWERMENT WEBSITE TOOLS

A healthcare organization's website can and should be used to empower patients in their care journey. Many web-based tools exist to support patients in a wide array of activities, from checking symptoms and renewing prescriptions to accessing test results. Beyond empowering patients, these tools can help healthcare organizations (HCOs) cultivate a digital culture for their patients.

The significance of web-based patient empowerment resources was recognized in the 2022 CHIME Digital Health Most Wired (DHMW) survey. Under the Patient Engagement section, participants were requested to identify which of 22 carefully selected tools/functionalities patients could access through the organization's website or patient portal. While certainly not an exhaustive list, the 22 patient empowerment tools reflect a wide array of valuable capabilities.

The percentage of participating organizations offering each web-based tool is depicted in Chart 1. With 16 (73%) of the 22 tools reportedly available in 80% or more of participating organizations, provider organizations have clearly embraced web-based resources as part of their patient empowerment efforts.



**CHART 1: Percent of HCOs offering select web-based tools**

Test results
Discharge/checkout instructions
Secure messaging with providers
Immunization records
Bill payment/bill status check
Access patient specific education
OpenNotes (e.g., progress notes)
Access to electronic med record
Prescription renewal request tool
Share electronic medical record
Transmit care info externally
Access non-English pt specific edu
Provide medical hx direct to EHR
Complete survey in EHR
Access family education
Update insurance information
Access non-English family edu
Self-mgmt tools for chronic care
Asynchronous provider visits
Symptom checker
Wayfinding via wireless guidance
Parking assistance and payments

0.0%  20%  40%  60%  80%  100%

**Percent of 2022 DHMW Participating HCOs**

2022 Digital Health Most Wired Survey
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## Web Traffic

One of the most common ways HCOs assess the effectiveness of their website is to monitor web traffic and engagement metrics (e.g., number of pages visited; duration on the site; etc.). Tracking web traffic can help HCOs better understand what content and resources patients seek and what content/resources the organization should highlight.

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Given the utility web-based patient empowerment resources offer users, it stands to reason that the more web-based resources provider organizations offer patients/consumers, the more likely those intended audiences will use the organization's website. But is this true?

**Do organizations with expansive web-based patient empowerment tools have different/better website utilization performance metrics?**

To address this we question, we looked to compare the "stickiness" of a healthcare organization's website to the number of web-based tools provided by the organization.

## Website "Stickiness"

Using a popular website analytics program, we captured the following web traffic measures for the September through November 2022 period for all 2022 DHMW participating organizations:

- **Absorption rate:** The percentage of website visitors viewing more than one page on the website during a session
- **Visit duration:** The average time on the website during a session
- **Pages per visit**: The average number of pages visited per session
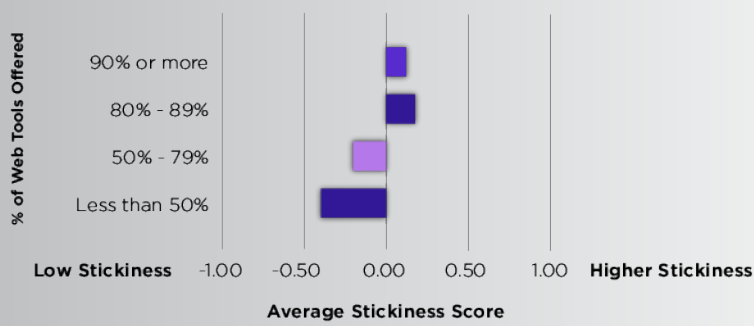
Combining the three measures in a statistically manipulated way, a website Stickiness Score was calculated for each 2022 DHMW participating organization such that higher degrees of "stickiness" occur when… Higher percentages of visitors view more than 1 page, longer periods of time spent on the website, and More pages viewed per visit.
Chart 2 depicts the distribution of organizations by their stickiness score, with the highest/ Lowest stickiness scores displayed.



**CHART 2: Distribution of 2022 DHMW Participants BY Website Stickiness Score**

Highest Stickiness Score = **3.02**
Absorption Rate = 75.7%
Visit Duration = 14 mins 00 sec
Pages Per Visit = 6.0

Lowest Stickiness Score = **-2.07**
Absorption Rate = 12.0%
Visit Duration = 0 mins 09 sec
Pages Per Visit = 1.2

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Categorizing organizations into logical groupings based on the percentage of web-based tools offered, we then calculated each groupings average Stickiness Score revealing (Chart 3) **a generalized positive association between the array of healthcare tools provided on a healthcare organization's website and the "stickiness" of the website.**

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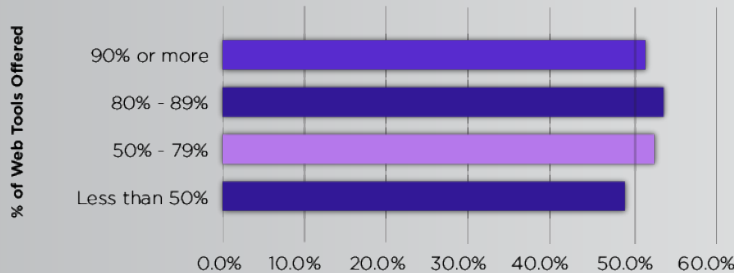## CHART 3: Average Stickiness Score BY Percentage of Web-Based Tools Offered



**% of Web Tools Offered**

- 90% or more
- 80% - 89%
- 50% - 79%
- Less than 50%

Low Stickiness   -1.00   -0.50   0.00   0.50   1.00   Higher Stickiness

**Average Stickiness Score**

**The more webtools offered... the slightly "stickier" the website.**

The practical application of the Stickiness Score on the previous chart can be better understood by analyzing the individual metrics of the Stickiness score

## CHART 4: Absorption Rate (the percentage of website visitors that view more than one page on the website)



**% of Web Tools Offered**

- 90% or more
- 80% - 89%
- 50% - 79%
- Less than 50%

0.0%   10.0%   20.0%   30.0%   40.0%   50.0%   60.0%

A visitor's exploration of a website generally increases as the array of tools expand, but this association is weak and generalized at best, suggesting...**something other than the number of web tools are driving visitor interests.**

## CHART 5: Visit Duration (The average time in seconds on the website)
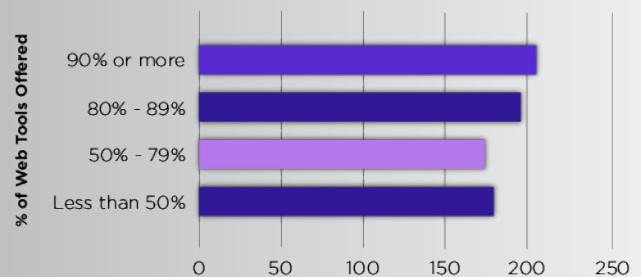


**% of Web Tools Offered**

- 90% or more
- 80% - 89%
- 50% - 79%
- Less than 50%

0   50   100   150   200   250

After a certain point...the more tools offered, the more time website visitors stay on the website.

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## CHART 6: Pages Per Visit
### (The average pages per visit)
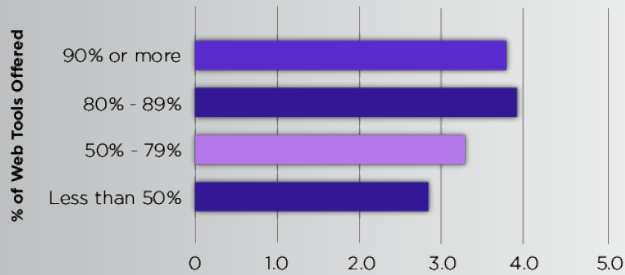


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After a certain point...the more tools offered, the limited impact it has on the average number of pages website visitors' access.

## Implications

While these findings do not strongly support the idea that web-based tools help drive website engagement... neither do they necessarily diminish the value of web-based tools. They raise questions regarding the appropriateness of traditional website "stickiness" measures as a resource for assessing web-based healthcare tools. As an increasing number of healthcare organizations offer web-based services in external patient portals and/or via mobile apps, traditional provider website analytics tend to miss counting this patient/ consumer traffic.

**Using organizational web traffic measures to justify organizational investment in a patient empowerment tools may provide an incomplete view of the market's reliance on web-based patient empowerment resournces and lead to some unfortunate conclusions.**