# **Assessing populations’ wellbeing across cultures: Can Healthy Days go global?**Caraline Coats, Vice President, Bold Goal & Population Health Strategy at Humana

Measuring the force of hurricanes is a relatively simple matter: assess the sustained wind speed, and cross-reference with the established classification scale to get a sense of potential damage to properties. Measuring the damage to the wellbeing of populations affected, however, has traditionally been a complicated affair.

In late 2017, Florida experienced two major hurricanes. Though a very difficult time for the state, a four-item questionnaire is reported to have made measuring the mental and physical health of how people were affected significantly easier.

Healthy Days was developed in the 1990s by the Center for Disease Control and Prevention in the United States. The population health tool measures the Unhealthy Days of individuals by asking them how many days their physical and mental wellbeing was poor over the previous month.

I spoke at the 2019 International Consortium for Health Outcomes Measurement (ICHOM) Conference to discuss experiences of using the Healthy Days tool – as well as to explore whether it could have broader applicability in healthcare systems and populations across the world. The opportunity represented perhaps one of the first public discussions of the possibility of having one, universal health-related quality of life measure used globally. The outcome was unanimous –every delegate and member expressed being dedicated to improving population health their respective countries as well as globally.

**Potential benefits of Healthy Days**

*Ease of use*

“When we look at the three criteria that we examine when selecting an outcomes measure – simplicity, generalizability and ease of administration – we find that the Healthy Days measure fits this quite well,” stated Mona Khalid, Ph.D., Vice President of Outcomes Research Development and Analytics at ICHOM

The tool measures mental and physical wellbeing, which is a key benefit. Traditionally, healthcare provision has been inclined to drive a separation between the two. But as an understanding grows that this is an unhelpful and artificial distinction, Healthy Days could open conversations about an area of wellbeing that, in many parts of the world, remains somewhat taboo.

*Speed and low cost of administration*

Healthy Days involves only four questions which means it is speedy and relatively cheap to administer. It can be done via phone, mail or verbally in an office setting. In a world in which all developed healthcare systems are under growing pressure – financially and when it comes to increased quantity and complexity of demand – both cost effectiveness and speed are key advantages for any measure.

*Correlation with chronic conditions and service utilization*

Of course, the tool has to prove to offer valuable health-related insight. Healthy Days has demonstrated a strong linear correlation with healthcare resource utilization (inpatient and outpatient), as well as with costs and presence of chronic conditions. Put simply: the higher the number of Unhealthy Days in a population, the higher the rate of chronic disease and service utilization.

*Can indicate when social determinants of health are at play*

The tool also strongly correlates with social determinants of health (SDoH). These are social aspects, like food insecurity, social isolation, loneliness and transportation that play a role in a person’s health and wellbeing. It was reported that people who suffer from these specific SDoH have higher Unhealthy Days than those who have chronic conditions, averaging 25, 26, 29 [Unhealthy Days a month] - whereas chronic conditions are more in the teens.

It was suggested this makes the tool well placed to support recognition of the complex contributors to the health of a population – and a concrete way in which to assess progress on addressing them. As one representative from the public health system New South Wales, Australia pointed out, “There's strong evidence that investing in the early years of life will prevent the onset of a very large proportion of chronic physical and mental health disorders, but somehow in our systems, we're not quite able to make this shift of resources just yet.”

In this instance, the value in something like Healthy Days could be a way of giving recognition of all the complex contributors to improving the health of the community, something concrete for the region to work towards.

**Potential applications of Healthy Days**

Outcome measurement and population health surveillance is clearly a valuable application of the tool. But evidence suggests it can also be employed as a proactive interventional tool in under-served populations, with broader support – assistance with social and health issues, for example – offered to anyone whose Unhealthy Days hit a certain level.

Delegates suggested Healthy Days could have value as a ‘top level’ assessment too, enabling professionals to identify areas which might need further investigation. A representative from Charité Berlin – one of the largest teaching hospitals in Europe –reported their staff may be thinking of using Healthy Days as a screening tool for their whole population, and if something lights up, more specific questions can be sent.

Once a problem has been identified, Healthy Days might be used as a teaching and motivational tool – particularly for those with chronic conditions. Comparing someone’s number of Unhealthy Days at the start of an intervention vs. once an intervention has begun could encourage an individual to continue with lifestyle changes or medication adherence, for instance.

People under the concept around ‘I now have 10 more Healthy Days a month to do whatever it is I want to do.’ And, they are motivated to remain engaged.

**Potential challenges**

Could Healthy Days be implemented in more settings; more countries; help give more information on more populations and support the delivery of better care across the world?

*The counting method*

One delegate from Western Australia was encouraged by Healthy Days, but had one key query: could the fact that days are in effect counted twice, once for physical ill health and once for mental ill health, lead to confusion?

In fact, patients are explicitly told that it is theoretically possible to have up to 60 Unhealthy Days in a month. Andrew Renda, M.D., Associate Vice President, Bold Goal & Population Health Strategy, Humana added that it was rare for someone to have more than 30. “And at that point you really kind of stop talking about the number itself and say: every day of your life is unhealthy, physically or mentally or both. At that point you have that conversation to ask is this due to a combination of chronic conditions and social determinants? It opens up a conversation with a patient.”

*Transferability between countries and cultures*

Healthy Days measures might be used differently between countries and cultures, considering differences in translation and definition of a healthy diet. If applied worldwide, the baseline of Unhealthy Days may vary from nation to nation for a given measure and expected baseline number. But research has demonstrated the tool remains sensitive in any country where it has been employed.

*Applicability in acute settings*

Dr. Renda suggested use of the tool in an acute setting was potentially more complicated, because that means something’s been happening to make you feel sicker to land you in the hospital. That said, Dr. Renda noted it’s important to survey a patient with Healthy Days several times over the course of a period to understand: ‘where were you before you ended up in the hospital, what happened in the hospital and what happens afterwards’.

*Reliability for chronic conditions*

For a delegate working in value-based care at a South African healthcare provider, the stability of the score in chronic conditions was of interest.

Similar Unhealthy Days baselines have been found for specific chronic populations. Diabetes tends to average at around 15, heart failure at 18 and depression at 22 – and that’s been consistent year-over-year for the four years that the work has been done.

*Sensitivity*

A representative from a medical school in Portugal explained that the country’s population has much poorer health than those in other European countries, and the test may increase lack of sensitivity for that population. “If you just ask for Healthy Days, all days would be unhealthy,” she said.

There seems little doubt that going from a lengthy survey to a shorter one will somewhat affect sensitivity. But that reality could perhaps be outweighed by the ease of administration and breadth of coverage, not least the exploration of mental health and daily activities alongside physical wellbeing.

*Recall bias*

The tool may be quick to administer, but could relying on patients’ memory of the previous month lead to challenges? Rather than marking Unhealthy Days per day, the survey relies on asking someone to recall the past month.

A degree of recall bias is to be expected, as is a tendency for people to ‘round up’ to the nearest five (five, 10, 20) because it’s easier.

But there nonetheless remains a fairly consistent distribution across any population – young, older, sick. “In any given population we have 30-40% of people say they have zero Unhealthy Days, and then you have a long tail that goes out from there.”

*Administrative burden*

For a representative from the Netherlands, the potential administration that could be involved for physicians in introducing Healthy Days was the foremost concern.

However, the nature of the questions and the diverse methods by which they can be administered could perhaps be an advantage. Telephone (including by automation), e-mail, and point of care are all options. So is integration into an electronic patient record, with a reminder appearing to ask the question and the physician then simply entering the number.

It could help physicians to see the tool not as an extra job, but as an opener to conversation to discuss number of Unhealthy Days in the last month, assess what’s driving the issue and get down to the core of what’s causing the issue.

*Use by caregivers*

Could caregivers be involved in that conversation over the number of healthy days? As one delegate put it: “If a person is older and can’t recall the days, do you include them in the answering of the questions?”

The reality is that situation is one of the very few in which Healthy Days does not have applicability – it can only be used for adults who are able to respond for themselves.

**Future possibilities**

Healthy Days seems to be an interesting population health assessment tool with potentially broad applicability and applications. Future plans for use of the tool include studying not just correlation, but causation.

As explained by Dr. Renda, strong linear correlations exist between the increase in a population’s Unhealthy Days, and the increase of costs and utilization. The reverse is now being studied, examining whether costs decrease if someone has a high number of Unhealthy Days and they undergo some type of intervention to improve health.

Wider use of the tool could also lead to seeing SDoH as clinical quality measures. Work has been done with the National Quality Forum and could potentially be done in the future with ICHOM, looking at codifying things like food insecurity, social isolation or housing insecurity as quality measures. Opportunities can open up once you elevate social determinants as clinical gaps in care.

While four questions might not provide the complete solution to moving to better understanding of population health, there appears to be a broad agreement among countries that they could constitute a very good start.

**Further information**

To find out more about the Healthy Days measure, visit <https://www.cdc.gov/hrqol/hrqol14_measure.htm>

For more on Humana’s approach to population health and its use of Healthy Days, visit <https://populationhealth.humana.com/progress-report/#boldgoalProgress>