

## Netflix & Pill

### what healthcare systems can learn from Netflix's success

Opinion Editorial

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As the originators of the Silicon Valley Human Resources bible, Netflix Culture: Freedom and Responsibility, Netflix has come to exemplify the user-friendly system<sup>1</sup>, to which the North American healthcare system is the antithesis. Inundated with need and outdated in approach, the healthcare system is a labyrinth of bureaucracy that overwhelms even the healthiest and most able-bodied among us. This monolith is ripe for disruption, and the strong values, purposeful culture, and consumer-centred approach outlined in Netflix Culture provide the perfect guidance for the personalized future of medicine.

#### From Hollywood to the Hippocratic Oath: The Shared Values of Netflix & Medicine

The modern iteration of the Hippocratic Oath<sup>2</sup> and the nine "Netflix Values" (NV) outlined in Netflix Culture<sup>1</sup> show an ideological alignment that supports the possibility of a Netflix-inspired culture shift in healthcare systems. Physicians are trusted on a daily basis to make "wise decisions despite ambiguity" (NV: Judgment), "learn rapidly and eagerly" (NV: Curiosity), and to "challenge assumptions and suggest better approaches" (NV: Innovation). The Netflix Values also reflect the aspirational yet unachieved aspects of hospital culture. One example is seen as hospitals often fail to represent the Netflix Value of Selflessness as physicians seeking to gain rank have shown narcissistic responses to ego-threats<sup>3</sup>. In a profession where mistakes can often be matters of life and death, there is also incentive for healthcare professionals to not "be quick to admit mistakes" (NV: Honesty). Using Netflix Values as a guideline, hospitals may improve their culture to become more compassionate institutions for both patient and practitioner.

#### From Boardroom to Bedside

After the "9 Shared Values", there are six other key Aspects of Netflix Culture; High Performance, Freedom and Responsibility, Context not Control, Highly Aligned/Loosely Coupled, Pay Top of Market, Promotions & Development. Under 'High Performance', Netflix asserts that "stunning colleagues" form the backbone of the company and that "internal cutthroat or sink-or-swim behaviour is not tolerated". This element of Netflix's culture is desperately needed in medicine, where toxic competitive attitudes are fuelled by increasingly unattainable standards for medical school admission<sup>4</sup> and residency placements<sup>5</sup>. Furthermore, medicine often celebrates what Netflix calls "Brilliant Jerks" (such as Dr. House of House, MD featured on Netflix); Netflix does not. They believe that "cost [of Brilliant Jerks] to teamwork is too high", and a similar mentality in healthcare may serve to foster increased collaboration and healthier work environments.

There are however, some important Aspects of the Netflix Culture that would be maladapted to the healthcare system. Under 'Freedom and Responsibility', Netflix preaches rapid recovery over error prevention (the "fail fast" startup mantra) and under 'Highly Aligned/Loosely Coupled' the emphasis on "minimal cross functional meetings" and "occasional post-mortems on tactics to increase [strategic] alignment. These are obviously not appropriate for the hospital setting; taken literally, post-mortems tend to be quite important in healthcare as a mechanism for learning and future error prevention.

#### Personalized Movies, Personalized Medicine

Once the shared foundational values of Netflix and Healthcare are recognized and the culture

has been adjusted and adopted, there remains one fundamental tool that has been critical to Netflix's success: the algorithm. A 2014 article in *The Atlantic*<sup>6</sup> revealed that in order to capture what people look for in movies, Netflix had created 76,897 unique "alt-genres" and trained taggers to describe films (think symptoms). Based on the symptoms you select, as well as stockpiles of data on where, when, how, and how much you watch, the algorithm provides you with a personalized diagnosis of your movie preferences<sup>6,7</sup>.

It is easy to see the parallel to personalized medicine, but harder to swallow the implications. The National Human Genome Research Institute defines Personalized Medicine as an approach that includes "individual's genetic profile to guide decisions made in regard to the prevention, diagnosis, and treatment of disease"<sup>8</sup>. In the healthcare system, physicians have thus far played the role of the movie-tagger, weaving a clear plot-line around symptoms to suggest a diagnosis. However, algorithms including those in IBM's Watson and other machine learning projects have been making significant progress<sup>9</sup>, threatening doctors into unknown spaces where technical expertise may verge on obsolescence.

This encroachment is especially pertinent as the technologies for integrated, personalized medical system more rapidly develop<sup>10</sup>. Wearable technologies are among the fastest growing tech-trends in Silicon Valley, attracting millions of dollars in venture capital investments. Consumer devices such as the iWatch should partner with nano-drop blood test innovators such as Theranos<sup>11</sup> to sample blood at regular intervals without you noticing, or Empatica<sup>12</sup> to monitor electrodermal activity. Pulse-oximetry, blood pressure, temperature and other basic information could be collected with unprecedented consistency, providing algorithms with a more holistic picture of the patient's health than a five-minute appointment could ever achieve.

### In the Patient's Best Interest

So if algorithms start doing the diagnosing, and robots are already performing delicate surgeries with more consistency than top surgeons, what will our hospitals look like? What will the physician do? The answer lies in what we seek when we go to a healthcare professional: care<sup>13</sup>. The medical profession need not fear irrelevance, as the physician's capacity for compassion and human intuition are unlikely to be replaced by cold robotic touch any time soon. As such, hospitals should embrace and adapt to a systemic change that is long-overdue. The 'Seven Aspects of Netflix Culture' will help healthcare institutions shift into the future, and the 'Nine Netflix Values' give reason to believe that this shift will be a technical rather than ideological one. The values embody compassion, honesty, and innovation, which will help physicians and hospitals shift into their more "care" based-roles. It is time for healthcare to restructure, simplify, and integrate as a system, and to justify the costs that are sure to come, we need only change the subject of Netflix's five word Expensing Policy; "Act in Netflix's the Patient's Best Interest".

### REFERENCES

1. McCord P. How netflix reinvented HR. *Harvard Business Review*. 2014 Jan 1;92(1):71-6.
2. Miles SH. *The Hippocratic oath and the ethics of medicine*. Oxford University Press; 2005 Jun 2.
3. Alexander GC, Humensky J, Guerrero C, Park H, Loewenstein G. Brief report: Physician narcissism, ego threats, and confidence in the face of uncertainty. *Journal of Applied Social Psychology*. 2010 Apr 1;40(4):947-55.
4. Mitchell J. Perfectly qualified, but can't get in. *Globe & Mail*. 2009 Dec 2.
5. Peterkin AD. *Staying Human During Residency Training: How to Survive and Thrive After Medical School*. Fifth Ed. University of Toronto Press; 2016.
6. Madrigal A. How Netflix Reverse Engineered Hollywood. *The Atlantic*; 2014.
7. Vanderbilt T. The science behind the Netflix algorithms that decide what you'll watch next. *Wired*; Aug 2013.
8. National Institutes of Health. *Talking Glossary of Genetic Terms, Personalized Medicine* National Human Genome Research Institute; 2016. <https://www.genome.gov/glossary/>
9. Rhrissorakrai K, Koyama T, Parida L. Watson for Genomics: Moving Personalized Medicine Forward. *Trends in Cancer*. 2016 Aug 31;2(8):392-5.
10. Khosla, V. 20-percent doctor included & Dr. Algorithm, speculations and musings of a technology optimist. *Khosla Ventures*; 2016.
11. Ioannidis JP. Stealth research and Theranos: reflections and update 1 year later. *Jama*. 2016 Jul 26;316(4):389-90.

12. Garbarino M, Lai M, Bender D, Picard RW, Tognetti S. Empatica E3—A wearable wireless multi-sensor device for real-time computerized biofeedback and data acquisition. In *Wireless Mobile Communication and Healthcare (Mobihealth), 2014 EAI 4th International Conference on 2014 Nov 3 (pp. 39-42)*. IEEE.
13. López A, Detz A, Ratanawongsa N, Sarkar U. What patients say about their doctors online: a qualitative content analysis. *Journal of general internal medicine*. 2012 Jun 1;27(6):685-92.

## Social Disadvantage and Food Security in a Forcibly Displaced Population in Bogotá, Colombia

Research Article

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### Abstract

Forcibly displaced status constitutes a significant and unfair social disadvantage in reaching a state of food security. Qualitative data among a forcibly displaced community in Bogotá, Colombia, revealed that participants experienced social marginalization, political barriers and economic hardships that hindered their access to food and were directly related to their displacement. The results of this study underscore the need to strengthen social integration efforts and expand mental health and counselling services.

### Introduction

The city of Bogotá, Colombia, is facing a crisis of food security among its rising population of forcibly displaced persons<sup>1</sup>. Internally displaced persons and international refugees are forced to endure indirect violence at their destination through social, political and economic structures imposed by their displacement<sup>2</sup>. Studies have shown that internally displaced migrants have a lower quality of life than the urban poor<sup>3</sup>, indicating a social disadvantage associated with displacement that deserves further investigation.

The objectives of this study were to evaluate the perceived state of food security among displaced persons in Ciudad Bolívar, Bogotá, by exploring the specific structures imposed by their displacement that prevent them from accessing food, how participants adapt to their behavior when confronted by food scarcity, and the effects of food insecurity on health.

### Methodology

Information was collected via semi-structured interviews, which explored perceived state of food security, perceived state of vulnerability, individual experience of displacement and a description

of eating patterns. A domiciliary visit was also carried out to gather information about nutritional contexts within the home and neighborhood.

### Results

A total of 10 semi-structured interviews and 1 domiciliary visit were carried on a total of 12 forcibly displaced persons in Ciudad Bolívar, the poorest locality of the city of Bogotá<sup>4</sup>.

Socially, participants faced marginalization through loss of support from family members that previously protected them against food shortages. Politically, participants were restricted from accessing the aid they were entitled to through complicated bureaucracy. Economically, moving to the city represents a significant increase in cost of life, and a negative impact on ability to earn. Few forcibly displaced persons arrive in Bogotá with formal qualifications, literacy or the education necessary to find stable employment in the city, making it difficult to earn a sufficient income. From a behavioral perspective, participants coped with food shortages by changing their diet, withstanding hunger, buying less food and accepting charitable donations. Psychologically, participants described a sense of apathy and hopelessness. Physical health