



**nytia labs**  
The preventive care platform

# A data-driven preventive care platform

## Abstract

In Canada, three out of five people over the age of twenty live with one or more chronic diseases, four out of five are at risk and 65% of deaths are from them. In U.S., nearly half the population suffer from them(43%).

The direct cost of chronic diseases accounts for about 58% of the annual health care spending in Canada, which is \$190 billion. While the cost of diet-related disease in Canada in 2015 was estimated at \$26 billion/annum. In U.S, Chronic illnesses account for 75% of the \$2.2 trillion the government spends on health care each year in the U.S. (Source: Centers for Medicare & Medicaid Services (CMS)).

The annual economic impact on the U.S. of the seven most common chronic diseases is estimated to be \$1.3 trillion, which could balloon to nearly \$6 trillion by 2050. (Source: Milken Institute)

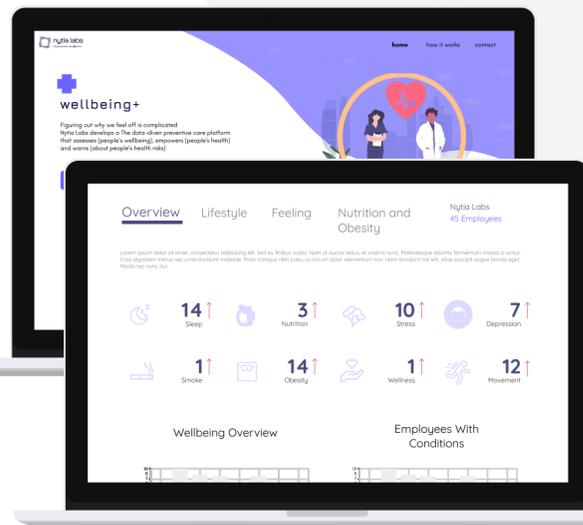
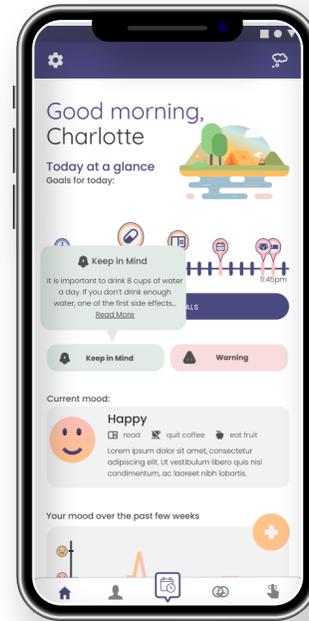
Although a lot of work is being done, in the context of our platform, we're using a data-driven approach to lower the impact of chronic diseases on both our economies and lives.

## Objectives

- Develop a model that will aggregate users nutrition, movement, lifestyle and biometric data in order to provide insights about chronic health risks and how to avoid them (recommendations)
- Use the same data to empower users well-being (mental, wellness, etc)
- Develop an analytic platform to help corporations make right decisions ahead against the negative impacts of chronic conditions

## Data Collection

We needed both scientific data and clinical data for us to start working on our model. We've been able to collect more than a billion data since 2018 as well as using some data provided by other companies. We also partnered with some companies in order to benefit from some of their evidence-based developed models, to empower our platform.



## Methodology

- Use aggregated data to quantify well-being indicators (stress, depression, wellness, movement, body, obesity, nutrition, smoking), using established evidence-based models and machine learning models.
- Use algorithmics to observe changes on the well-being indicators over time, to identify problem areas.
- Use processed scientific data to build an AI based recommendation engine to empower with health risks & recommendations

## Results

- A mobile health app that allows users to set goals, get health check-in, set moods, get personalized health risks & recommendations(including fitness prescription), to book appointments with health care professionals to start fixing health alerts based on recommendations, before they get worse.
- An analytics tool that helps partnered stakeholders by providing community health insights to guide policy changes.

## Recommendations

- Users should periodically input data for an optimal outcome.
- Users' data privacy is our top concern, that's why we've chosen IBM as our top technology partner, since it's a leader in cybersecurity.
- Our platform doesn't intend to replace doctors on health check-in.

**References:** <https://nytialabs.com>

**Contact:** [nouridine@nytialabs.com](mailto:nouridine@nytialabs.com)