



MMI HOLDINGS

Applied wellness artificial intelligence to manage occupational and health risks

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Metropolitan Health

momentum



METROPOLITAN

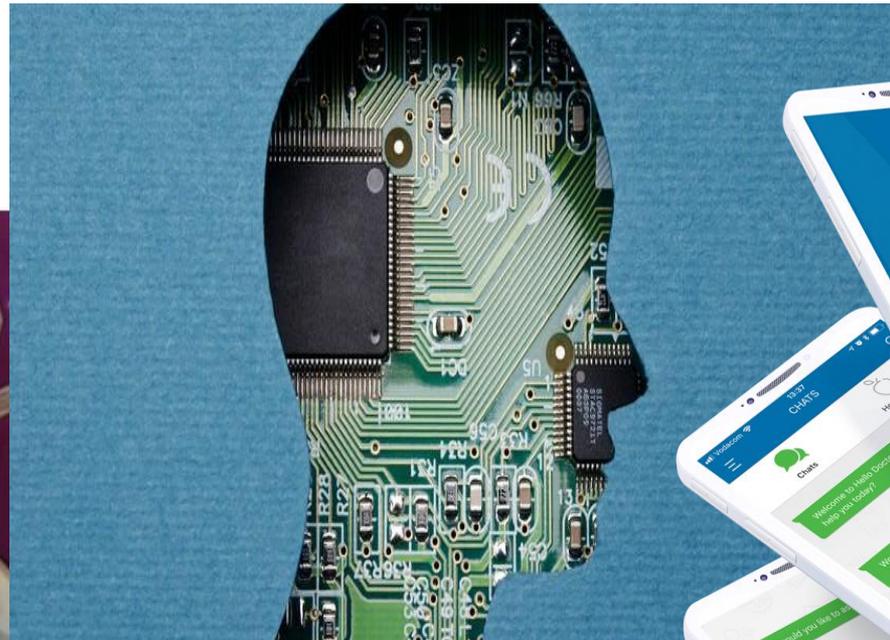
GUARDRISK

multiply



What is Machine Learning?

Artificial intelligence (AI) is embedded into three mediums AI technologies used within the field of wellness. The three mediums are intangible, tangible and embedded.



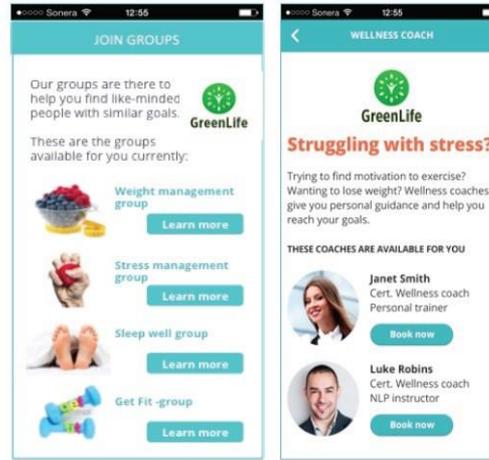


Health Risk Profile for all Schemes

- Completed algorithms for all schemes:
 - Diabetes
 - Pneumonia
 - Psychiatry
 - Cardiovascular Diseases
 - Respiratory Diseases
 - Chronic Renal Disease
 - Epilepsy
- These diseases accounted for ~50% of the hospitalisation costs incurred by GEMS in 2017
- These diseases accounted for ~99% of the CDL related hospitalisation costs incurred by GEMS in 2017
- Aggregate health risk profile

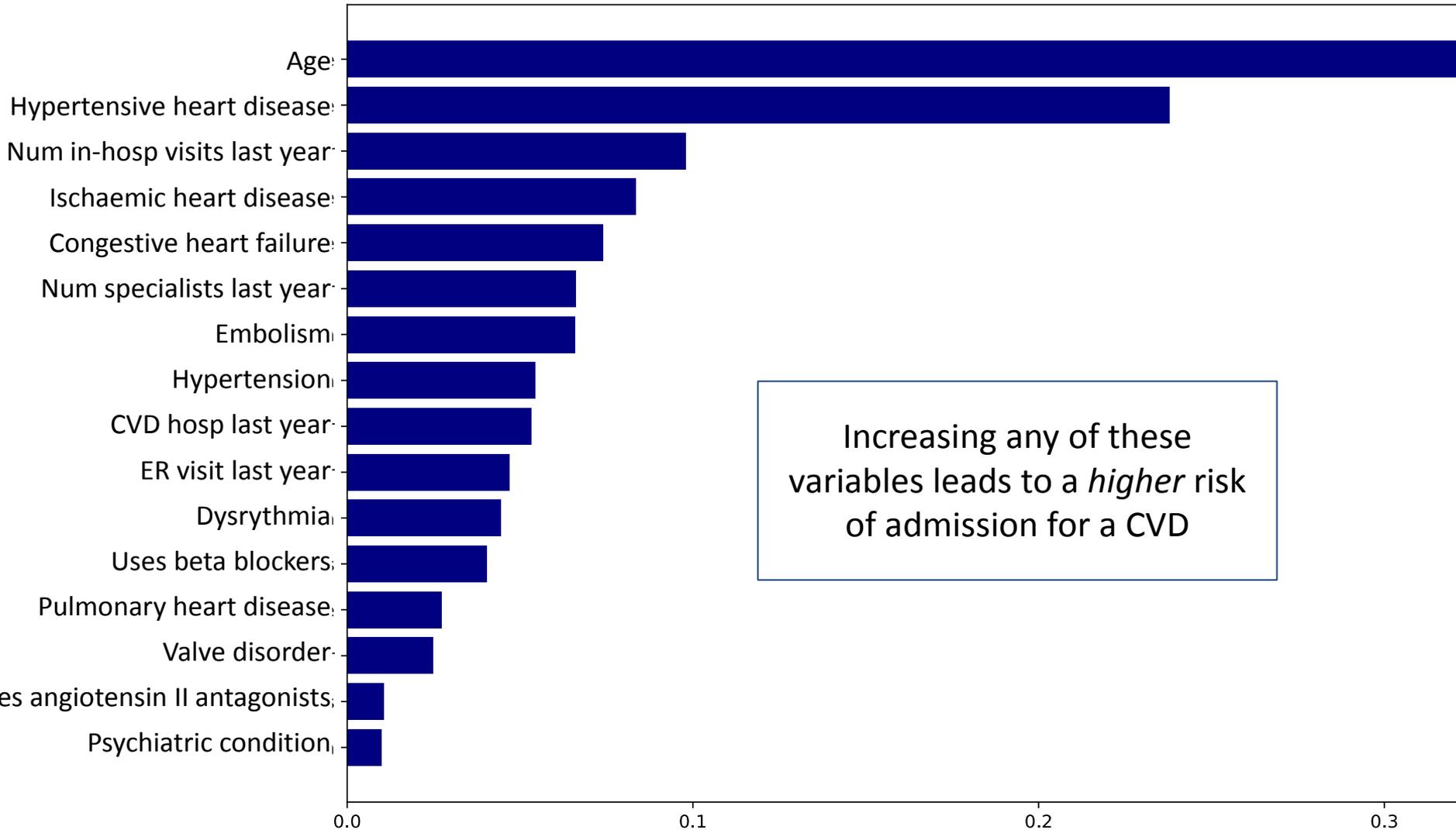
Comes with services from YOUR wellness programs

Allows programs to bring their own services and content into Wellmo app with a co-branded look.





Understanding the Cardiovascular Algorithm





Output

Member ID	Scheme		Diabetes Risk	Pneumonia Risk	Psychiatric Risk		Aggregate Health Risk
3721579	Imperial		Very High	Very High	Very high		Very High
209661	<u>TransMed</u>		Very High	Very High	Very High		
...			
6526327	<u>WoolTru</u>		Very L				
2753148	<u>TransMed</u>		Hig				
...				
3722407	Imperial		Very L				
2782073	<u>TransMed</u>		Very L				



Common concerns
Num specialist visits last year 43

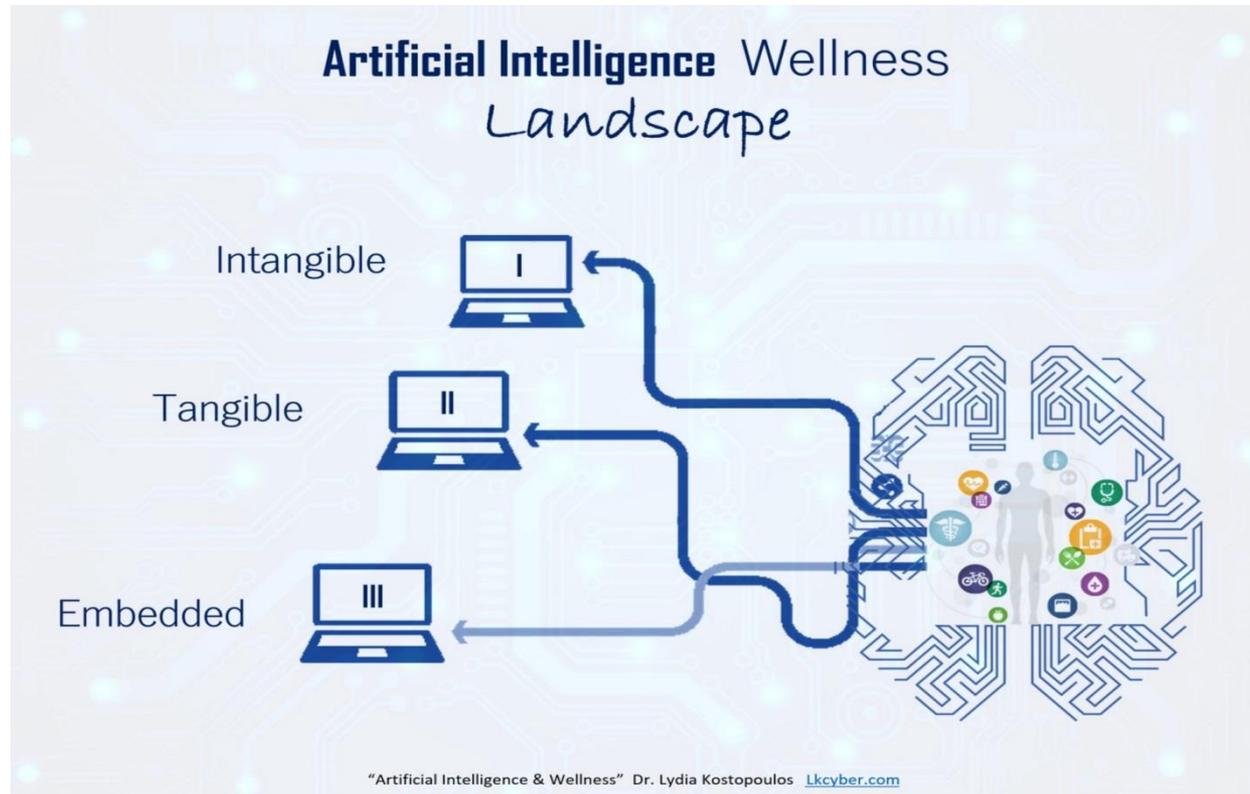
Diabetes-specific concerns
Authorised for diabetes (6 month) Yes
Diabetes chronic condition Yes

Pneumonia-specific concerns
Num respiratory visits last year 3
Charlson's comorbidity index 90%

Psychiatry-specific concerns
Visited a psychiatrist last year Yes
Num chronic psych meds 4
Suicide attempt Yes



Summary of Momentum Algorithms



- The FPR was roughly the same for the business rules and ML algorithms
- Pneumonia is excluded because there are no existing business rules



Summary of Momentum Algorithms

Disease	FPR	TPR		Difference	Improvemt
		Business Rules	ML Algorithm		
Diabetes	1.2%	21.1%	35.2%	↑ 14.1%	1.7X
Psychiatry	0.8%	5.4%	27.1%	↑ 21.7%	4.0X
Cardiovascular	6.0%	31.5%	51.7%	↑ 20.2%	1.6X
Respiratory	1.9%	5.6%	20.6%	↑ 15.0%	2.7X
Renal	0.02%	12.1%	24.2%	↑ 12.1%	2.0X
Epilepsy	0.3%	7.1%	35.7%	↑ 28.6%	4.0X

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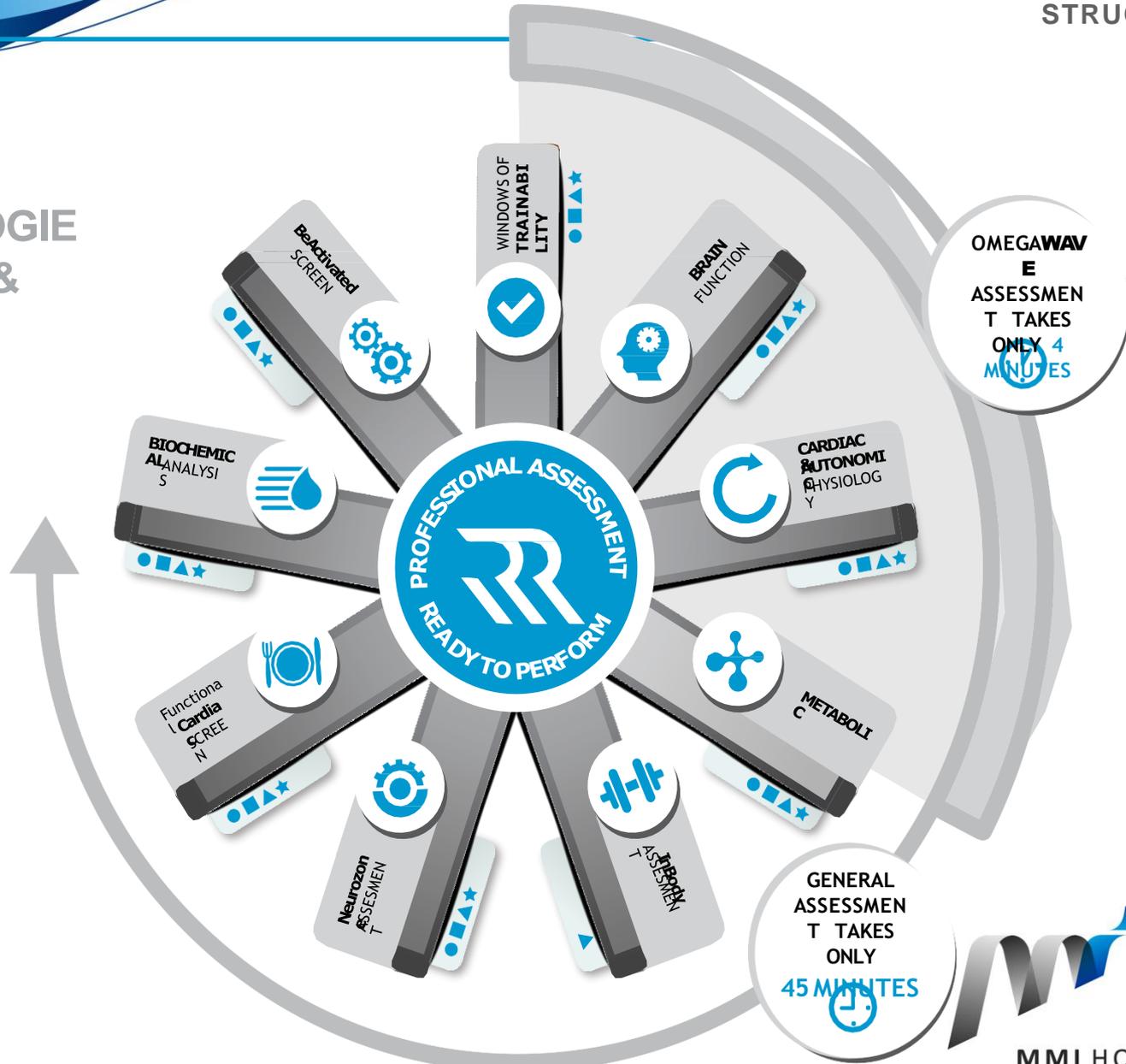
Risk Profile for all Employees - EAP

- Machine Learning Algorithms can be leveraged to proactively identify at-risk employees in need of EAP services
- The data collected on employees can be leveraged to train these machine learning algorithms
- Questionnaires can be leveraged to increase the volume of data collected on employees which in turn will enhance the accuracy of the algorithms
- Employers should look at innovative ways of collecting numerous data points including the following:
 - substance abuse
 - occupational stress
 - emotional distress
 - major life events, including births, accidents and deaths
 - health care concerns
 - financial or non-work-related legal concerns
 - family/personal relationship issues
 - work relationship issues
 - concerns about aging parents

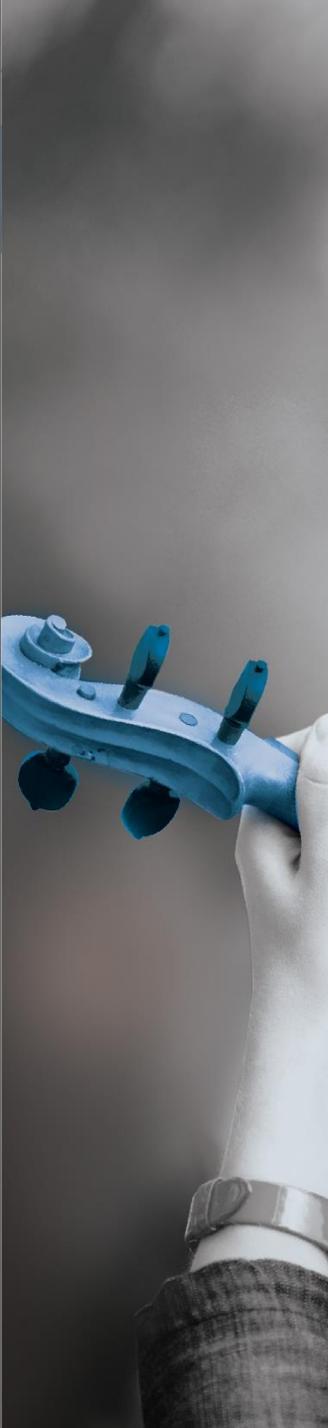


Practical Tools

METHODOLOGIES
SERVICES &
PRODUCTS



- SPORTS SCIENCE FOR EVERYONE**
- PROFESSIONAL
 - LIFESTYLE
 - ▲ SPORT
 - ★ CHILDREN



NEUROZONE

Through the **practical application of neuroscience** we deliver **effective solutions** with **extraordinary dividends for business leaders and their staff.**

Our methodology links neuroscience markers with human competencies.

Analytics provide clients with maps to guide optimisation of major **drivers for mastery** of any competency essential **for success.**

Neurozone's Model of Brain Performance, in combination with our Brain Performance Opportunity Diagnostic, as well as our correlative analytics serve as the platform for a revolutionary programme designed to accelerate **mastery of four core competencies for high performance leadership:** resilience, self-leadership, learning capacity and innovation capacity.



omegawave

Omegawave is technology, used in Wellness and Sports Performance industries, with years of clinical and medical research behind it. Previously the technology was used by Doctors and Scientists for research in Medicine and Sport Science as well as by sports teams and elite sportsmen and -women.

In essence it is "**Wellness Science and Sports Science for everyone**". In order to ensure *optimal wellness* and *optimal sports performance* we must be able to *measure what is going on* physiologically in the body in order to *take the correct action* **to maintain optimal human performance.**



hello doctor



MMI HOLDINGS



DISCUSSION