# Gli strumenti di Valutazione Multidimensionale **interRAI** in Italia

# **Predictive Analytics**

# **Tom Millonig**

Chief Executive Officer, Profility Inc. Roma, 23 settembre 2015







- The Global Challenge
- Profility Leverage's interRAI Assessments
- Patient Specifics Predictive Analytics
- Applications



### Changing Healthcare Landscape Managing Care Across the Continuum

# "The Global Challenge"

### • Elderly care cost explosion

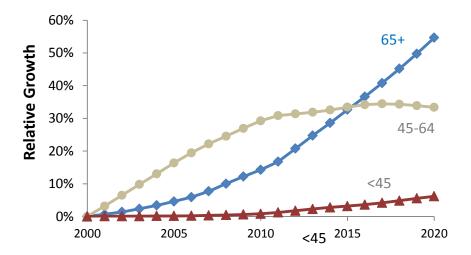
13% of the population accounting for
34% of the spending and increasing

### • Care settings are shifting

- Post-Acute Care is the fastest growing market segment in medicine
- Data Workflow EMRs
  - "Big data" is driving analytics focused on improving patient care and streamlining work flow

Source: Kaiser Family Foundation; US Census; PWC Health Research Institute; Forbes Insights

#### GROWTH IN HEALTHCARE EXPENDITURES BY AGE GROUP











### • Dramatic cost increase for PAC in the last 10 years - 63B.

- As the world's population ages, the market <u>demand for post acute</u> <u>care continues to accelerate</u>.
- Transition to value-based patient care.
  - Moving away from episodic care payments to the adoption of acute/post-acute bundled payments. <u>Patient Centric Care Plans</u>

#### • Providers are looking for "big data" predictive analytics.

 Manage quality across the continuum, improve post acute care placement & reduce readmissions with solutions linked to patient and facility data.

### • Profility is filling this gap.

 With our Quality Indicators and proprietary Predictive Analytics Platform, <u>we offer real-time, patient specific decision support</u> <u>solutions that improve quality and reduce cost.</u>

Source: MedPac, Healthcare Spending and the Medicare Program













Our **MISSION** is to provide personalized, decision support solutions for Post-Acute Care patients ensuring they get the Right Care in the Right Environment at the Right Time.

- Methodology rooted in real-time, patient specific profiling
- Leveraging external & internal databases to improve decisions
- Payer and Providers realize the benefits of improved quality and reduced cost when patient specific care is delivered in the Post-Acute Care Setting







An international network of researchers, started in the US in the mid 1980's, operating on over 30 countries with the goal of improving health care for persons who are elderly, frail, or disabled.

#### InterRai Instruments Worldwide Coverage



#### OVER 90 MILLION INDIVIDUAL PATIENT ASSESSMENTS - DATASET

 Comprehensive individual assessments, activities of daily living, cognition, social activity, disease, admissions, care services received and hundreds of others. Home Care, LTC, Palliative Care and many other care settings

# FUNCTIONAL AND CLINICAL QUALITY INDICATORS

 Create Functional and Clinical Quality Indicators for Post-Acute Care benchmarking in SNFs, Long-Term Care and Home Care

#### **EXCLUSIVE PREDICTIVE ANALYTICS PARTNER**

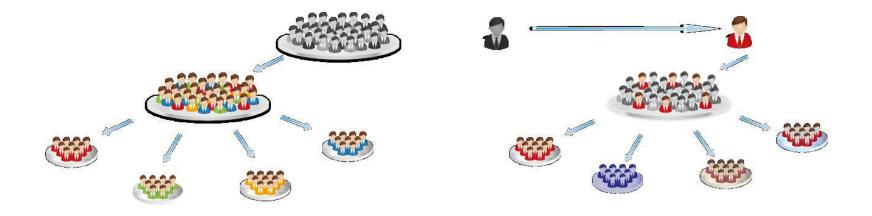
 Profility picked as the <u>exclusive</u> predictive analytics partner to leverage their massive assessment database to provide personalized patient predictions.



# Unique Profiling Technology



Profility's predictive analytics engine analyzes big-datasets of patient records, from different environments, to identify in real-time subsets of patients with homogenous outcomes.



Collecting a network of "group profiles" based on millions of patient records Identifies the most relevant "individual profile" from the network of "group profiles" <u>"Bottom's Up" Approach</u> Potential outcomes can be evaluated for different environments and/or care alternatives based on massive external or internal data bases





# **Patient Specific Prediction Displayed**

- Summary of 15 common domains predictions of improvement and decline
- Patient's specific percentile of overall care benefits
- Main patient's characteristics of interest
- 15 health domains with treatable conditions and projected improvement or decline in each domain

#### 

O Sintesi Elaborazione		
Numero di Arée Problematiche triggerate 5 Stima del successo della riabilitazione: 1,16		
Sintesi elaborazione		
Nessun Cambiamentu	11	
Peggioramento Moderato	2	
Miglioramento Moderato	2	

#### 

#### O Evoluzione nel tempo della Aree Problematiche

Area Problematica	Stato del Trigger	Profility Prediction
ADL	Yes	Nessun Cambiamento
IADL	No	Nessun Cambiamento
Umore	Yes	Nessun Cambiamento
Cadute	Yes	Nessun Cambiamento
Incontinenza urinaria	No	Peggioramento
Disturbi intestinali	Yes	Peggioramento Moderato
Comportamento	No	Peggioramento Moderato
Stato confusionale acuto	Yes	Miglioramento Importante
Piaghe da decubito	No	Nessun Cambiamento
Dolore	No	Peggioramento Moderato
Stato cognitivo	No	Nessun Cambiamento
Condizioni Cardio-Respiratorie	Yes	Miglioramento
Comunicazione	Yes	Nessun Cambiamento
Farmaci	No	Nessun Cambiamento
Relazioni sociali	No	Nessun Cambiamento
Numero di giorni stimati per la riabilitazione	-	91,70233



# **Post Acute Care Focused Applications**



Profility's Engine can be naturally integrated into various applications to reduce costs, improve clinical care and efficiency across different healthcare segments.

### **Applications**





## **Post Acute Care Focused Applications**





