

# 10

## *mHealth and Population Management*

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### CONTENTS

|           |  |     |
|-----------|--|-----|
| 10.1      | Challenges of Population Management .....                            | 158 |
| 10.2      | Our Solution: Personalization and NeuroIPS™ .....                    | 159 |
| 10.2.1    | Overview .....   | 159 |
| 10.2.2    | What Makes Our Method Unique .....                                   | 159 |
| 10.2.3    | Modular Solution .....   | 160 |
| 10.2.3.1  | Profiling and Target Group Segmentation .....                        | 160 |
| 10.2.3.2  | Customer Communication Analysis .....                                | 160 |
| 10.2.4    | Key Success Factors for Compliance Support .....                     | 161 |
| 10.2.5    | Four Key Goals of Our Measures .....                                 | 161 |
| 10.2.6    | Unique MassineBoecker Profiling Method .....                         | 161 |
| 10.2.7    | Benefit from Our Support .....                                       | 163 |
| 10.2.8    | Behavioral and Psychological Triaging System .....                   | 163 |
| 10.2.9    | Our Method in Brief .....  | 164 |
| 10.2.10   | Advantages of Personalized Communication .....                       | 165 |
| 10.2.11   | Royal Road to Understand Implicit Personality .....                  | 165 |
| 10.2.11.1 | The connection between personality systems and design elements ..... | 166 |
| 10.2.12   | Psychological Characterization with the Visual Questionnaire .....   | 168 |
| 10.2.13   | Population Segmentation .....  | 170 |
| 10.2.14   | Emotional Disposition .....  | 171 |
| 10.3      | Early Results .....  | 172 |
| 10.3.1    | Genetic Fingerprint of the Customer Personality .....                | 172 |
| 10.3.2    | Case Study: Smoker/Nonsmoker Study .....                             | 173 |
| 10.3.2.1  | Project .....  | 173 |
| 10.3.2.2  | Result .....   | 173 |
| 10.3.2.3  | Relevance for Population Management .....                            | 173 |
| 10.3.3    | Case Study: Leading Global Software Supplier .....                   | 174 |
| 10.3.3.1  | Project .....  | 174 |
| 10.3.3.2  | Result .....   | 174 |
| 10.3.3.3  | Relevance for Population Management .....                            | 175 |
| 10.3.4    | Case Study: Major Retailer .....                                     | 175 |
| 10.3.4.1  | Project .....  | 175 |
| 10.3.4.2  | Result .....   | 175 |
| 10.3.4.3  | Relevance for Population Management .....                            | 176 |

|          |  |     |
|----------|--|-----|
| 10.3.5   | Case Study: Leading Health Plan.....         | 176 |
| 10.3.5.1 | Project.....                                 | 176 |
| 10.3.5.2 | Result.....                                  | 176 |
| 10.3.5.3 | Relevance for Population Management .....    | 176 |
| 10.3.6   | Case Study: Leading Diagnostics Company..... | 176 |
| 10.3.6.1 | Project.....                                 | 176 |
| 10.3.6.2 | Result.....                                  | 176 |
| 10.3.6.3 | Relevance for Population Management .....    | 177 |
| 10.4     | Conclusion .....                             | 177 |
|          | Questions.....                               | 178 |
| 10.A     | Appendix .....                               | 178 |
|          | References.....                              | 180 |

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## 10.1 Challenges of Population Management

Spreading unhealthy behavior of individuals and an aging population drive increasing prevalence of chronic diseases and related comorbidities, which make up 80% of the exploding health-care cost. Historic and current approaches of disease management and general population motivation via prevention and wellness programs have not shown satisfying impact on required personal behavior change. One-size-fits-all programs do not move the needle enough. People need to be inspired using the unique language and channels that meet their individual needs, because change is highly personal.

Current approaches to alleviate the situation through a broad number of direct-to-consumer health programs (health-related apps and web-based programs) provide at best point solutions and feel very piecemeal from the perspective of the consumer. What health plans and care organizations are missing is the opportunity to centralize data capture, consolidate analysis, and perform in-depth analytics, which provide the necessary platform for a new level of comprehensive and highly personalized intervention and outreach programs.

Consumers want more seamless interactions; however, relying on discipline and will-power of the consumer alone will fall short. In order to get health-care cost under control, health plans should pursue an integrated approach of analytics and related personalized intervention design.

Key challenges of population management today are as follows:

- Dramatic increase of prevalence and incidence of chronic diseases often influenced by lifestyle choices and bad health habits; related cost for health care are exploding.
- Limited reach into affected population due to high-cost communication models (mainly call centers staffed with well-trained but high-cost clinicians and nurses).
- Limited effectiveness of intervention models due to the complexity and variety of individual issues.

Traditional disease management programs typically reach and impact only a small percentage of the target population. Even for this small segment, the contact frequency

is like several weeks or months, which yields only low effectiveness and only moderately alters health behavior or lifestyle-related habits. Despite the *personal* outreach, the call center agents mostly address *external* behavioral management and do not have the means to focus on stimulating self-motivation.

The current disease management system is set in a legacy communication pattern, which is very difficult to escape in a stepwise way. What is needed is a much more fundamental change: a rollout of low-cost and automated communication processes, which allow addressing broad population segments with high frequency yet in an individualized approach. The advent of mobile health (mHealth)-related technologies and communication systems provides an opportunity to initiate such a paradigm shift in population management.

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## 10.2 Our Solution: Personalization and NeuroIPS™

### 10.2.1 Overview

What is missing today is the ability to communicate with large numbers of patients in a low-cost yet personalized way. Despite the availability of proven low-cost technologies, which facilitate efficient and broad-scale communication, automated outreach methods combined with individualized member communication are lacking.

Conventional interventions and instruments are often less effective than desired, often because patients are not being addressed in a way that chimes with their emotional state and motivations. However, a high level of patient compliance is the cornerstone of long-term, stable therapy success. In order to achieve this kind of sustained cooperative behavior, patients need to understand the prescribed therapeutic measures and recommended behavioral changes and be intrinsically motivated to take on responsibility.

Our system provides such combination of customized, automated mass communication tuned to patients' individual personalities. Using our NeuroIPS method in combination with our automated outreach system, MassineBoecker identifies the inner feelings of each individual, which allows to effectively communicate with them. People are in different situations and our outreach methods reflect that.

We have developed a thorough understanding of many of the weaknesses in current disease management programs. Our system is designed to overcome these weaknesses and optimize the effectiveness of planned interventions. Our goal is to provide a reliable method for personalizing interventions and communication in a completely new way.

### 10.2.2 What Makes Our Method Unique

MassineBoecker has developed a new and more effective way for communicating with large populations such as those with health risks or chronic diseases. This new approach starts by determining the psychographic and personal characteristics of individual patients and representative population segments. We create a tailored communication profile that stimulates the patient's internal motivation guaranteeing long-lasting compliance that enables sustained self-management. We integrate all major dimensions: demographic, biometric, educational, sociographic, psychographic, and emotional information of the individual.