

## **Personalized Medicine: Clinical Translational from Bench-to-Bedside**

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**INTRODUCTION AND BACKGROUND:** Personalized Medicine (PM) refers to devising custom-made individualized approach to treating patients for better outcomes and improving quality of life. The whole paradigm is meant to shift the focus from illness to wellness by inventing, and adopting out-of-the box cutting edge high technology solutions for bringing disease treatment and health maintenance options from bench-to-bedside.

In this review article we have discussed PM concept that influence several biotechnology, medical device, and pharmaceutical areas to bring effective and viable treatment solutions. We have projected PM with respect to its marketplace, products and ensuing developments.

**METHODS:** We addressed PM challenges by facilitating strategic partnerships between key industry leaders, entrepreneurs, technology drivers, and venture capitalists. Our coordinated efforts maximize return on investment (ROI) for our partners to bring quicker, better and affordable PM solutions. We provide effective innovative tools across research organizations, traditional business models and startups. We help PM stakeholders develop suitable connections and networks, reducing return on time (ROT) for maximizing profitability and personalized patient care.

**RESULTS:** Areas of Biopharmaceutical, Medical devices and Diagnostic Industry where PM can have greatest impact are product development and patient outcomes. The translational aspect of PM from conception of scientific findings to their integration in safe and effective therapies is the biggest challenge today. While developing products for ‘benefited’ patient population we also consider those non-benefitting characteristics which limits the access of PM for certain populations as this provide crucial information for adding predictive tools to the PM tool kit.

**CONCLUSION:** PM concept has been around for quite some time but has gained momentum recently by the innovative developments in gene therapy, gene sequencing, and high-tech sector. PM concept has been partly shaped by today’s public health challenges of anticipated physician shortages, inflation, unpredictable outcomes, and ‘diabesity’ epidemics. Besides impacting the patients PM approach also benefits the society by saving billions of dollars that would otherwise be spent in developing medicines by trial-and-error or one-size-fits-all methods.