



# University of Pittsburgh

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Featured Inventors: Richard K. Zimmerman MD MPH, Mary Patricia Nowalk PhD RD, Jonathan M. Raviotta MPH CPH

## The 4 Pillars™ Practice Transformation Program

*Step-by-step guides to quality improvement in outpatient settings*

### Value Proposition

The 4 Pillars™ Practice Transformation (4 Pillars™) Program is a multi-faceted, cloud-based quality improvement (QI) platform that provides health care organizations with a library of up-to-date, evidence-based QI programs from leading medical practice innovators. Unlike custom QI programs that require an investment of time and resources to develop in-house, the 4 Pillars™ Program offers programs in a ready-to-implement format crafted by academic experts allowing outpatient clinicians to easily execute improvement protocols while treating patients.

The 4 Pillars™ Program for Immunization has been successfully tested in over 50 primary care offices showing that practices who used the program's strategies and minimized missed opportunities for immunization improved vaccination rates.

### Market Opportunity

More than 82% of physician group practices responding to a 2014 Medical Group Management Association Physician Practice Assessment reported that they actively engage in internal processes to improve clinical quality for the patients they serve. The estimated market size of the 4 Pillars™ Program for the Primary Care market segment, with over 200,000 practicing physicians is approximately \$65 million annually. The 4 Pillars™ Program will be monetized through the sale of licenses to scientific information providers and user fees from health care organizations employing 12.2 million healthcare professionals in the U.S.

### Competitive Landscape

The 4 Pillars™ Program addresses an emerging market in medical practice. The competitors in this space are continuing medical education providers who are inexperienced in long term behavior change and quality improvement implementation, and QI consultants designing custom programs with limited scalability.



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### Technology

The 4 Pillars™ Program delivers a potential library of quality improvement programs using modern internet software. Scalability, performance, and security are baked into the code through the use of peer-reviewed open source components under active development. The 4 Pillars™ Program provides all the tools that are necessary for a scientist to create exceptional QI programs and for an organization to implement those programs to drive health outcome improvement and cost savings in clinical practice.

### Stage of Development

The 4 Pillars™ Practice Transformation Program for Immunization has been used in 3 large scale clinical trials. The program is being pilot-tested in a health system with more than 110 primary care practices. The next major release is funded and planning is underway.

### IP Landscape

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### Funding

The 4 Pillars™ Practice Transformation Program development and testing has been funded by:

The Center for Disease Control and Prevention	\$120,000
Merck Inc.	\$20,000
Pfizer Inc.	\$20,000

# FEATURED INVENTORS:

## ***Richard K. Zimmerman MD MPH***

Dr. Zimmerman is a tenured Professor in the Department of Family Medicine and Clinical Epidemiology, School of Medicine, with a joint appointment in the Graduate School of Public Health, University of Pittsburgh. He was founding chairperson of the Group on Immunization Education of the Society of Teachers of Family Medicine and is one of the developers of the award-winning app *Shots*. He won the 2016 Curtis Hames MD lifetime research achievement award. He is a practicing family physician and a primary contributor to the development and clinical testing of The 4 Pillars™.

## ***Mary Patricia Nowalk PhD RD***

Dr. Nowalk has served as epidemiologist, project director, research coordinator, and manuscript writer/editor with the PittVax Research Group for nearly two decades. In this time she has published more than 100 vaccine-related research articles. She is a primary contributor to the development and clinical testing of The 4 Pillars™ Practice Transformation Program.

## ***Jonathan M. Raviotta MPH CPH***

Mr. Raviotta is the project manager and lead developer of The 4 Pillars™ Practice Transformation Program at the PittVax Research Group. In the most recent development iteration, he served as the project owner and scrum master on a scrum team composed of internal team members, external programming vendors, and scientific collaborators.

## ***Publications***

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