

A tribute

## Patricia Fossum Waller, PhD (1932–2003)

C Rinehart, D A Sleet

### A pioneer in injury prevention and traffic safety

Patricia Mary Florence Theresa Fossum Waller, 70, died at her home on 15 August 2003, following a nine month battle with metastatic colon cancer. We had the good fortune of knowing and working with Pat to promote highway safety in the context of public health. She was a friend and mentor to many.

“Two roads diverged in a wood,  
and I —  
I took the one less traveled by  
And that has made all the difference” —Robert Frost

Throughout civilization, people have profited from the efforts and foresight of those rare individuals who have the ability to see what needs to be done to improve the human condition and the capacity to make it happen. Such has been the case with the history of traffic safety; such an individual was Dr Patricia Fossum Waller. Pioneer, leader, scientist, advocate, innovator, policy-maker, consensus builder, writer, speaker, visionary, friend, and mentor—Pat Waller was all of these and more. Such was the reach and influence of her work that it is nearly impossible to discuss injury prevention and traffic safety without hearing her name.

In 1967, Pat Waller became Associate Director for Driver Studies at the University of North Carolina Highway Safety Research Center and began a career that contributed significantly to reducing the human toll and public health burden from traffic related injuries. In 1965, the motor vehicle death rates were 25 per 100 000 population and five per 100 million vehicle miles traveled (VMT). By comparison, the death rates in 2001 were 14.75 per 100 000 population and 1.5 per 100 million VMT. These reductions were not the result of any single improvement but rather a combination of factors, including improvements in vehicle safety, highway design, and driver behavior. Pat Waller played a leading part in the implementation of improvements that helped drive these

rates down. She pointed out that “[i]f we were still experiencing motor vehicle fatalities at the 1966 rate, based on vehicle miles driven, we would have had about 147 000 such deaths in 1999 rather than the 41 611 that actually occurred”.<sup>1</sup>

Patricia Waller was a psychologist by training, and her initial focus was on driver behaviors and characteristics. She quickly recognized, however, that the relationships between the driver, the vehicle, and the road were largely interdependent and responsive to the larger societal context of laws and cultural norms. She got more involved in “how all these things worked together”<sup>2</sup> and became an advocate for applying a public health approach to prevent motor vehicle injuries. In addition, she helped the injury prevention field to understand the value of a health promotion framework.<sup>3</sup>

Pat Waller was also ahead of her time in understanding that generating facts did not always lead to policy reform; that reform required a combination of actions, community support, and changes in administrative attitudes. In looking back over the course of events that led to accomplishments in traffic safety, Pat commented, “Data alone were not sufficient to bring about major changes in policies affecting individual behavior. Success is attributable to a wide range of participants, including legislative, enforcement, judicial, public health, medical, and public organizations and advocates”.<sup>4</sup>

Pat Waller could not be tied to any one mold or mode. She was comfortable wearing her public health and traffic safety hats simultaneously. She introduced herself to the national transportation research community by becoming a member of the Transportation Research Board, an arm of the National Academy of Sciences, where she served on numerous study panels and committees. Her first foray into the realm of policy development was as director of the federal project that developed the criteria for the commercial driver’s license (CDL). Because Pat took a hands-on approach to traffic

safety, it was no surprise to many of us to hear she had attended a truck driver training school to learn how to drive double trailer trucks, which she did quite well.

In 1987, she had a key role in the development of the University of North Carolina Injury Prevention Research Center, one of the first five centers of excellence in injury prevention research funded by the Centers for Disease Control and Prevention. In this arena, she saw the potential to expand motor vehicle injury to a much broader level, because “...some of what [we] are concerned about are the very same things. I mean, if you look at something like alcohol, that’s traffic safety. But boy, that’s also fire safety and water safety and violence. There’s hardly an injury type where alcohol isn’t part of the picture. So, there were a lot of cross cutting issues in injury control and it was just kind of a natural”.<sup>2</sup>

Over the ensuing years, Pat effectively promoted the translation of scientific knowledge into tangible action on a number of fronts, including issues related to older drivers, pedestrians, licensing, the social aspects of transportation systems, truck safety, and alcohol impaired driving. As a member of the National Highway Traffic Safety Administration’s Research Advisory Committee, she consistently recommended a more extensive connection between highway safety and public health safety research.

Pat Waller created the concept of a graduated licensing system in the mid-1970s that provided for supervised driving phases, according to driver age and experience. Pat attributed her interest in such a system to her background in psychology and learning. She said, “it seemed to me that what we were doing, in the licensing of the young driver, violated absolutely everything that we knew about learning”.<sup>2</sup> She never believed driver education was the culprit or that 30 hours of classroom instruction behind the wheel was intended to transform a new driver to a proficient driver. She did believe that graduated licensing could help. In spite of her efforts, the graduated license system wasn’t adopted in North Carolina for many years because, according to Pat, “they just wouldn’t do it”. Pat did succeed in getting the state to lower the age for a driver’s permit from 15 and a half to 15, allowing young drivers a full year of supervised driving experience. Her last published work on the topic, a concise history of the genesis of graduated drivers licensing, appeared in 2003.<sup>3</sup>

Pat Waller could see the injury field beyond the horizon. Traffic safety and

public health were inextricably linked but not fenced in; there was always the larger picture: the transportation system itself and how it could meet social needs. In recent years, she argued for enlightened transportation policy that included accessible public transit for the transportation deprived. "There are ...real societal costs that result from transportation that does not occur, but should", she wrote. "These costs are based on the critical link between mobility and larger societal goals and include both economic and societal [costs]." Her examples included increased medical costs from delayed or canceled medical treatment due to lack of transportation; unemployment resulting from lack of transportation; and dropping out of school because transportation was unavailable. Regarding the latter, she stated that "when young people must discontinue schooling because of the lack of transportation, the societal costs of the interrupted education may not emerge for several years, yet their impact may continue for decades".<sup>4</sup>

Pat left the University of North Carolina in 1989 to become Director of the Transportation Research Institute at the University of Michigan (UMTRI)—one of the leading transportation research centers in the country—where she held academic appointments in the Schools of Medicine and Public Health and the Department of Psychology. She officially retired from the UMTRI in 1999, though she continued her research with the Texas Transportation Institute and others around the world, contributing to the scientific literature until shortly before her death. During these later years, Pat interests included promoting emerging transportation technologies such as the Intelligent Transportation System (ITS), noting at a 2001 Conference on Road Safety in Perth, Australia: "The technologies and systems being developed in Intelligent Transportation Systems offer unprecedented opportunity for addressing societal needs at a community level. Many technologies can readily be implemented to meet these needs, for example, advanced traveler information systems, automatic vehicle location, efficient trip routing and scheduling, assistance for stranded vehicles, and emergency re-routing of vehicles".<sup>4</sup> Such ongoing activities remind us of Pat Waller's career long enthusiasm for learning and applying knowledge to solve future problems.

True to her pioneering spirit, Pat agreed to serve on the World Health Organization (WHO) panel to develop the 2004 *World Report on Traffic Injuries*. She was to have been a senior reviewer for the report, chosen because WHO recognized her as instrumental in making the traffic safety and injury prevention field what it is today. Her input will be missed, though her work will not go unrecognized.

Patricia Waller was a visionary in the field of traffic safety and often a step ahead of the public health community. Her leadership and foresight, as well as the innumerable contributions she made to the field of injury prevention, have left a legacy that will carry us into the future.

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#### APPENDIX

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