

# Consumer Survey Indicates Aspirin Use Remains Less than Optimal in Stroke Survivors

John G. Fort, MD<sup>1</sup>, Lorraine R. Baer, PharmD<sup>2</sup>

<sup>1</sup>POZEN Inc., Chapel Hill, NC; <sup>2</sup>Baer PharMed Consulting, Ltd., Skokie, IL

## INTRODUCTION

- It is estimated that 87% of all strokes are ischemic, while 10% are intracerebral hemorrhagic, and 3% subarachnoid hemorrhagic.<sup>1</sup>
- The American Heart Association/American Stroke Association 2010 guidelines recommend antiplatelet therapy (and not anticoagulation) to reduce the risk of recurrent stroke or other cardiovascular events in patients with prior noncardioembolic ischemic stroke or TIA. Among the acceptable options for initial therapy is aspirin (ASA) 50-325 mg daily. The level of evidence for ASA use is Class I, Level A (treatment should be administered based upon sufficient data from multiple randomized clinical trials or meta-analyses).<sup>2</sup>
- Use of ASA is associated with adverse upper gastrointestinal (GI) events such as GI bleeding. Risk factors for upper GI events include advanced age (>65 years), previous peptic ulcer, and use of dual anti-platelet therapy.<sup>3</sup>
- Expert Consensus documents from the American Heart Association suggest proton pump inhibitors (PPIs) as the preferred agents for the treatment and prophylaxis of ASA-associated GI injury in patients who are at risk for GI adverse events.<sup>4,5</sup>
- Aspirin and PPIs are available over-the-counter, and therefore it is difficult to characterize whether patients with stroke are receiving treatment as recommended by current guidelines.
- The recent Agency for Healthcare Research and Quality (AHRQ) survey reported that ASA use among stroke survivors in the United States (US) was 57% over the 7-year period of 2000-2006, and that the use of any anti-platelet agent was 66%. When excluding individuals who stated that ASA was unsafe, use of ASA was recalculated to be 70% and use of any anti-platelet agent was 76%. No data were provided on ASA dosing regimens or provider recommendations.<sup>6</sup>
- The prevalence of ASA-intolerance causing shortness of breath or asthma attacks has been estimated at 1.2%.<sup>7</sup>

## References

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## Acknowledgements

Data collection and analysis were performed by Marketing Information Systems International, Inc., Englewood Cliffs, NJ. Ingrid Withereil, MPH, EditHealth, Inc. for editorial contributions.

## Funding

Research sponsored by POZEN Inc., developer of the investigational product, PA32540 (enteric-coated aspirin 325 mg + immediate-release omeprazole 40 mg). PA32540, which is not currently FDA-approved, is being developed for use in patients with cardiovascular disease who are at risk for developing ASA-associated gastric ulcers.

## PURPOSE

A survey was performed in individuals with previous stroke and/or myocardial infarction (MI) to quantitatively measure ASA and PPI usage patterns and to identify physician involvement in the therapeutic decision-making process.

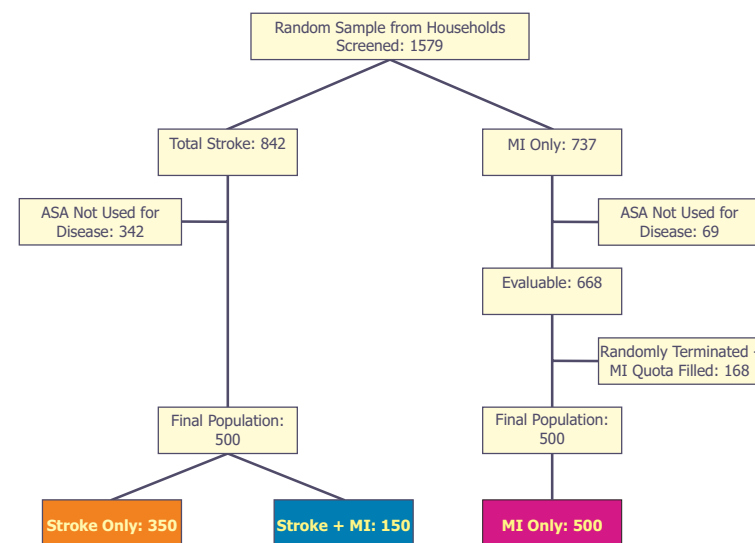
## METHODS

In December 2009, an internet-based questionnaire was completed using a consumer internet panel of 23,139 US households (HHs) with an individual or caretaker of an individual who had suffered stroke and/or MI.

After confirming that the HH had someone who met the diagnostic criteria, random sampling was performed to obtain a sample of 500 individuals in each disease category (stroke or MI [see definitions below]) who were currently taking ASA as a result of their cardiovascular condition:

- 500 individuals with stroke included persons with either previous stroke only or stroke + MI (together this was the total stroke population), and
- 500 individuals with MI included persons with only previous MI (this was the MI only population).

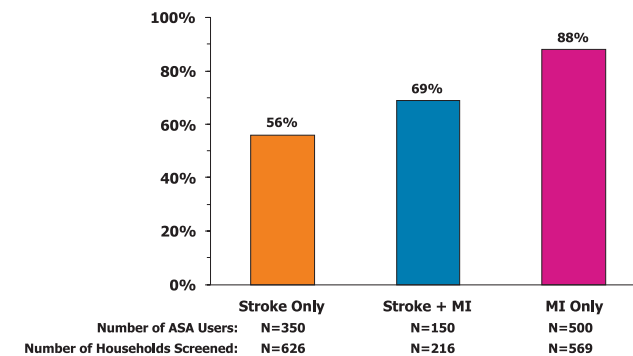
Figure 1. Sample Disposition



- Random sample of 1579 HHs screened → 842 total stroke and 737 MI only HHs.
- Aspirin was not used for stroke or MI in 411 HHs (342 total stroke and 69 MI only). These subjects were not questioned as to why they were not taking ASA.
- Analysis population:** The remaining 500 total stroke HHs and 500 of the 668 MI only HHs (168 MI only HHs terminated when MI only quota was filled).
- Total stroke population = 500 (350 stroke only + 150 stroke + MI); total MI population = 650 (500 MI only + 150 stroke + MI).

## RESULTS

Figure 2. ASA Users



- Considering the total stroke population of HHs screened (n=626 + 216), the use of ASA for secondary prevention was 59% (500/842). Considering the total MI population of HHs screened (n=569 + 216), the use of ASA for secondary prevention was 83% (650/785).

Figure 3. ASA Frequency

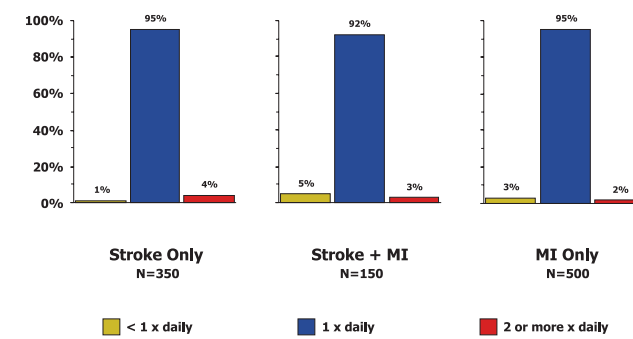


Figure 4. Most Frequent ASA Regimen

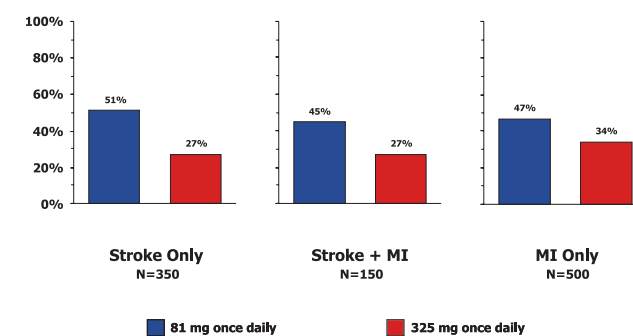


Figure 5. Use of ASA + Clopidogrel

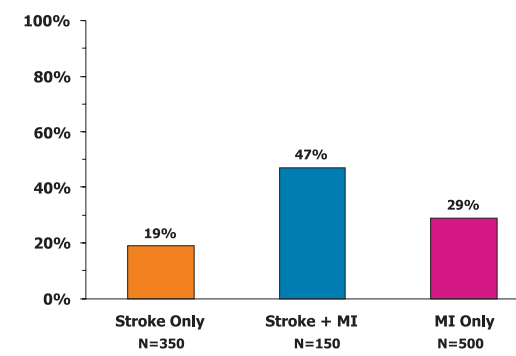
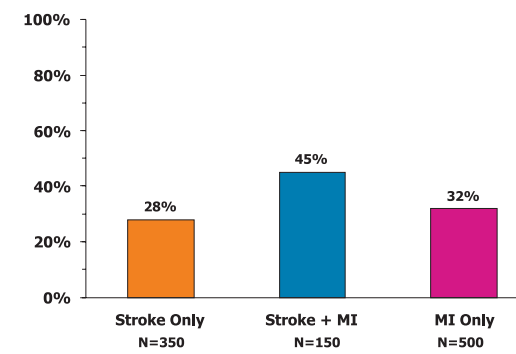


Figure 6. Use of ASA + Prescription Proton Pump Inhibitor



## SUMMARY

- Aspirin use among stroke survivors was <60% in this 2009 internet-based survey, which is similar to the 57% observed in AHRQ survey among US stroke survivors over the 7-year period of 2000-2006. In the AHRQ survey, after excluding individuals who stated that ASA was unsafe, ASA use was recalculated to be 70%.<sup>6</sup> The present survey did not inquire about why ASA was not being used.
- Use of ASA with a prescription PPI was highest in those individuals who had suffered both stroke and MI (45%).
- Stroke patients identified cardiologists and general practitioners as their primary healthcare provider.
- Cardiologists and general practitioners were the two physician groups that most frequently recommended ASA therapy to the total stroke population.

Figure 7. ASA Users Primary Physician

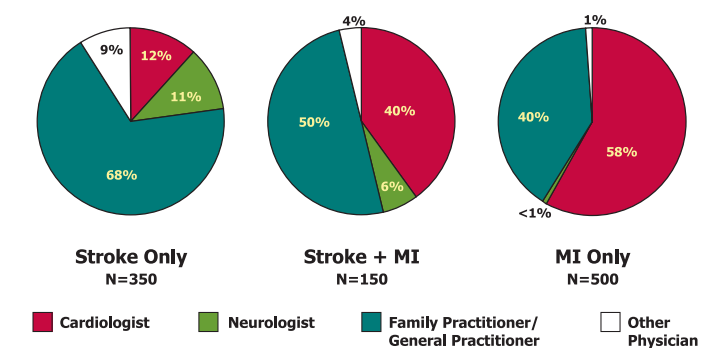
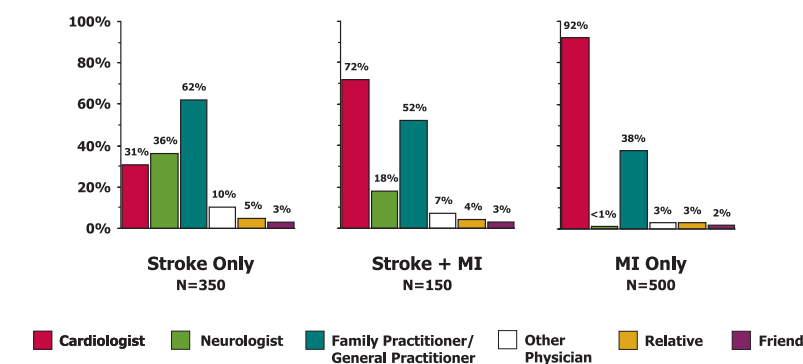


Figure 8. ASA Use Recommenders



## CONCLUSIONS

- Aspirin use in this survey was lower among stroke survivors, regardless of previous MI.
- Overall, approximately 40% of stroke survivors in this survey were not taking ASA for disease management. This survey, however, did not account for individuals who were not taking ASA due to allergy or hemorrhagic stroke.
- There has been essentially no change in the use of ASA for secondary stroke prevention between the years 2000 and 2009.
- Continued effort is needed to optimize the use of ASA therapy in stroke survivors, as recommended by current guidelines.