

Supplementary appendix: Cost details by category

Personnel: Each smoke alarm installation “blitz” involved the use of four fire engines to alert residents. Each fire engine required one firefighter to operate it during the blitz. For each fire engine, there were four teams that went door-to-door to install smoke alarms. Each team consisted of a firefighter, a fire prevention officer, and a volunteer who collected information about the house and residents. The cost estimate for firefighters’ time included the salary and benefits of all firefighters during blitzes. Firefighters earned different hourly wages; therefore, a combined hourly wage based on average salary and including benefits of four firefighters was multiplied by the length of time it took to conduct each blitz. No firefighter overtime hours were recorded. The cost for Fire Prevention Officers included the salary and benefits of 6 officers, who participated in blitzes and conducted follow-up visits. If the officers worked beyond 40 hours a week, they were charged as overtime hours (i.e., 1.5 times salary). The average salary and benefits costs for firefighters and Fire Prevention Officers were derived from local records. The costs for volunteers were calculated using a national wage for the value of volunteer time. The annual hours worked by volunteers were multiplied by \$22.55, the national estimated value of volunteer time in 2013.¹

Supplies: Installation supply costs included the cost of each smoke alarm unit (which included a new set of batteries), as well as installation supplies such as drills. Each smoke alarm cost \$11.23 (USD 2007). Administrative supplies included a computer, shelving, and other office supplies.

Materials: Educational materials costs included brochures and fact sheets. Advertisement costs included posters, postcards, and other materials used to notify residents before the blitz teams arrived in their neighborhoods. Advertisement only took place during certain years of the project. Educational program hours included the salary and benefits of 2 Fire Prevention Officers to conduct educational programs. If the officers worked beyond 40 hours a week, they were charged as overtime hours (i.e., 1.5 times salary). Administrative hours included the salary and benefits of a Smoke Alarm Program Coordinator to plan, attend meetings, do paperwork, and any other activities necessary to plan and prepare for program grant activities. No administrative overtime hours were recorded.

Transportation: Expenses included the cost associated with using fire engines during the smoke alarm installation blitzes as well as mileage recorded to and from blitz sites in personal vehicles (not including volunteers). During a blitz, apparatus from various areas of the city were assigned to participate. A fire engine traveled from the fire station to the meeting site, to the assigned streets for installations, back to the meeting site, and then back to the fire station. Each fire engine cost \$3.01 per mile (USD 2007) to operate, based on local cost accounting, and drove approximately 10 miles (round trip) per blitz. Personal vehicles are also included as part of the transportation costs. Personal vehicles were driven by salaried personnel to blitz sites, as well as to conduct follow-up and educational activities. They were charged at \$0.55 per mile. Travel expenses included the cost of Operation Installation personnel to attend annual grantee meetings across the country.

References

1. Independent Sector. The value of volunteer time: US total 2013 2016 [Available from:
https://www.independentsector.org/volunteer_time].