

# CWSF 2014 - Windsor, Ontario



## Sonia Stewart

### Monitoring Medication Adherence: Part 1

**Challenge:** Health

**Category:** Senior

**Region:** South Fraser

**City:** Surrey, BC

**School:** Earl Marriott Secondary

**Abstract:** To identify which cognitively impaired patients need help for medication adherence, I created a device that monitors how blister-packed medications were being used. Cameras (including internet-connected smartphones) were mounted on top of a 2-tier rack, photographing the blister pack on the lower level at timed intervals or when triggered by motion. A trail cam recorded the information most reliably, with minimal invasion of privacy.

#### Biography

I was born in BC, where I live with my parents, older sister and brother and my dog. I am currently in grade 11 in the French immersion program at Earl Marriott Secondary. I am on my school's volleyball team and am also a member of the Global Citizens Club. Last summer, I volunteered as a counsellor/leader at a week-long camp and now I am one of Surrey's "Nature Centre and Environmental education volunteer" as well as a "Park environmental stewardship volunteer". In my spare time, I really enjoy hanging out with my friends, listening to music and spending time outdoors. The idea for my project this year came from having a grandmother who has dementia, and from my mother who is a doctor. She has mentioned that she suspects some of her patients with poor memory may not be taking their medications properly, but she has no reliable way of checking. I wanted to find a way to help her and other doctors monitor medical adherence.

#### Awards

#### Value

Excellence Award - Senior - Bronze Medal Sponsor: Nuclear Waste Management Organization	\$100
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
<b>Total</b>	<b>\$2 100</b>