Introduction: The prevalence of childhood obesity in the US has reached epidemic status, with some states with rates as high as 20%. One way to reduce and prevent childhood obesity and its associated chronic illnesses, is by increasing daily physical activity levels. The main purpose of the current study is to compare changes in physical activity of youth during recess following zoning of a traditional playground. A secondary purpose is to investigate which zones elicit the greatest levels of activity for boys and girls. A tertiary purpose is to compare observational measures of physical activity (SOPLAY Instrument) to physical activity measured via pedometry.

Methods: Physical activity for 364 boys and girls from two institutions were observed and recorded at recess using systematic observation of play and leisure activity in youth (SOPLAY) and pedometers. Baseline data was collected for one week on traditional playgrounds. After one week the playgrounds were zoned for specific activity and physical activity was again observed and recorded. Results: The average percentage of boys and girls considered to be very active, increased by 10% following zoning, according to SOPLAY data. Average number of steps during recess also increased by a mean of 175 steps on zoned playgrounds vs. traditional. Conclusion: There are few times during the school day that one can influence behavior more, than on the playground, during recess. A zoned playground can be used as a simple and effective strategy to reduce sedentary behavior and increase activity during recess.