

**MAP-NE**  
Method for Assessing Physical activity in Neighborhood Environments)

Modified\* Version of SOPLAY for Evaluation of Physical Activity in Neighborhoods in New Orleans

\*Based on protocol provided by Thomas McKenzie of San Diego State University

### **RATIONALE**

Investigations of physical activity have been hampered by the lack of an objective tool for quantifying physical activity in “open” environments, such as recreational and leisure settings. Measuring activity in these environments is complicated because both the number of participants and their activity levels change frequently.

### **SUMMARY**

The System for Observing Play and Leisure Activity in Youth (SOPLAY) is based on momentary time sampling techniques in which systematic and periodic scans of individuals and contextual factors within pre-determined target areas are made. During a scan the activity of each individual is mechanically or electronically coded as Sedentary (lying down, sitting, or standing), Walking, or Very Active. One scan is made for both females and males, and simultaneous entries are also made for temperature and weather. Summary counts describe the number of males and females in any given setting and their activity levels. Energy expenditure rates (Kcal/kg/min) can also be calculated based on previously validated constants for each level of activity.

### **OBSERVATION AREAS**

There will be Neighborhood Measurement Areas which are predetermined observation areas in the intervention and control neighborhoods in which people may potentially engage in outdoor physical activity. Driving Routes will be established for each Control Neighborhood Measurement Area and each Intervention Neighborhood Measurement Area. Each Driving Route is a subdivision of a Neighborhood Measurement Area that defines the specific driving and observation pattern and orders the sequential collection of observational data in the neighborhood during each observation scan.

### **PREPARATION**

1. In advance of observations, driving routes will be established in each neighborhood with specified starting and ending points to assure that the same areas are observed in the same pattern consistently throughout the study.
2. On at least three occasions prior to actual data collection, trainees will drive through the neighborhood to become familiar with the driving route and observation plan.

3. During these training drives, the trainee will be seated in the front passenger seat, and an assistant previously certified for Driving SOPLAY will be seated in the right rear seat of the car. The trainee and certified assistant will discuss and code the age and physical activity level of each person on the right side of the car as the car passes them, looking one block down at each cross street. Following the training drives, this process will be repeated with no discussion until each trainee achieves a minimum of 80% agreement with a previously certified assistant on two consecutive drives in each of two neighborhoods.
4. Observers will have a schedule of observation dates and know when they are to observe in the, Control or Intervention Neighborhood. These assignments will be rotated among the observer teams sequentially.
5. Prior to leaving for the neighborhood, observers will report to the department at the assigned time and observation materials will be prepared including driving route maps, recording boards, and sufficient MAP-NE Data Recording Forms.

### **SOPLAY CODES AND RECORDING**

Observer ID	The Observer's ID
Temp.	The Fahrenheit temperature at the start of the observation period.
Weather	The weather conditions: S= Sunny, C=Cloudy, R=Raining
Date	The date: mm/dd/yy
Day of the Week	The day of the week
Neighborhood	The neighborhood ID number
Driving route	Refers to the letter of a previously designated Driving Route (see Route maps).
Start time	The start time of driving for that day and for each street in the Driving Route
S W V	S = Sedentary; W = Walking; V = Very Active
Comments.	Place to record any events or features that may help explain any of the data recorded.

### **OBSERVATION PROCEDURES**

1. On the observation form, enter the Observer ID, Neighborhood ID, Date, Day of Week, the Temperature, and the Weather (sunny, cloudy, or raining).
2. Begin the first Driving Route. Enter the Start Time for this Driving Route.
3. Drive slowly through the area following the driving directions on the map. The observer should scan the entire street for people who are outside, using the mechanical counter to count the number of Girls who are Sedentary, Walking, and Very Active, the number of Boys who are Sedentary, Walking, and Very Active, the number of Women who are Sedentary, Walking, and Very Active, and the number of Men who are Sedentary, Walking and Very

Active. The observer should record an observation for each person after observing that person for one second. The observation should record the predominate level of activity observed for that person. Factors to determine ages include height, head to body size proportion, level of physical development, and maturity of facial features.

4. Always scan both sides of the street, except for bordering streets where only the side of the street inside the Measurement Area should be counted. Observe each person on the street once. If an observed person reappears on the same street, do not record a second time. Do not back-track to count new people entering the street. When you reach a side street, look west and count people within one block from the street you are driving on. If the same person reappears on a different street, count the person on that street as well.
5. Each time the observation team reaches a stop sign or light at a horizontal border street, transfer these data to the Driving SOPLAY Data Recording Form. Do not reset the counter before continuing to the next street.
6. Immediately after finishing a street, drive directly to the next street in the designated driving route and scan as above.
7. Upon completing each driving route in the Neighborhood Measurement Area, proceed to the next Driving Route, reset counters to zero, and continue as above.
8. At the conclusion of the Driving Route, record the time.
9. Return to Tulane SPHTM to complete the Comments portion and turn in the Data Recording Form.

#### KEY WORDS

Neighborhood Measurement Area – A predetermined observation area around the intervention or control school in which people may potentially engage in outdoor physical activity.

Driving Routes will be established for each neighborhood.

Neighborhood Driving Route – A subdivision of a Neighborhood Measurement Area that defines the specific driving and observation pattern and orders the sequential collection of observational data in the neighborhood during each observation scan.

Scan - A single observation movement from left to right across a Target Area or Scan space.

During a sweep, each individual person in the area is counted and coded as being Sedentary (S), Walking (W), or Very Active (V).