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Estimating prevalence, awareness, and treatment of hypertension using list-assisted RDD methodology^a

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Summary: Hypertension is a significant public health problem in Korea. Survey data on hypertension is important because it is essential to identify subgroups where risk may be greatest and prevention efforts might be targeted. We conducted a study for estimating prevalence, awareness, and treatment of hypertension in a large city population. A single stage epern RDD sampling methodology was used to produce survey estimates with smaller sampling variances. The results based on the complete set of weighted survey data as well as mean 24-hour blood pressure levels are compared with recent findings in hypertension from the Korea National Health and Nutrition Examination Survey and Community Health Survey.

Keywords: List-assisted RDD, Survey estimates, Awareness of hypertension, Sample weights

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List-Assisted RDD Sampling Method

Disposition	<i>n</i> (%)
Nonworking	
“Unassigned” intercept message	5,810 (48.7)
Continuous silence, silence after ringing, etc.	83 (0.7)
Subtotal	5,893 (49.4)
Working	
FAX	272 (2.3)
Business	788 (6.6)
Unknown if housing unit	3,545 (29.7)
Known if housing unit	1,430 (12.0)
Subtotal	6,035 (50.6)
Total	11,928 (100.0)

Source: Kim *et al.* (IJPOR, 2012)

Definition of Hypertension

- Systolic/diastolic blood pressure (BP) $\geq 140/90$ mmHg or currently taking medication to lower high BP
- The average of up to three brachial systolic and diastolic BP readings is used for systolic and diastolic BP values (NCHS).

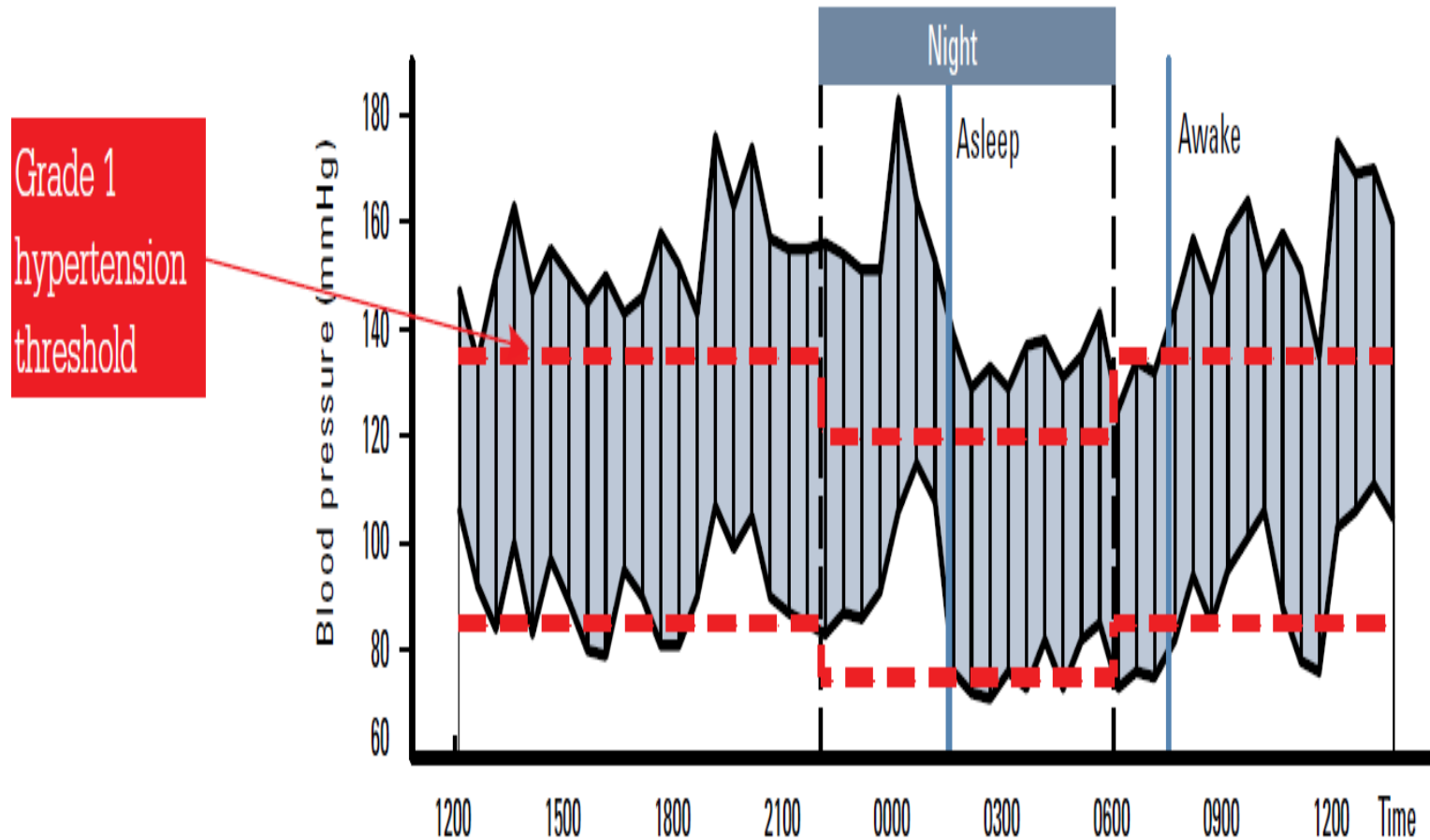
24-Hour Blood Pressure

- Recommended by UK National Institute for Health and Care Excellence (NICE, 2011)
- *Ambulatory blood pressure monitoring* involves measuring BP at regular intervals (usually every 20-30 minutes) over a 24 hour period while patients undergo normal daily activities, including sleep.
- Increasingly used to assess patients with hypertension

24-Hour Blood Pressure (Cont.)



24-Hour Blood Pressure (Cont.)



Source: Australian Family Physician (2011)

24-Hour Blood Pressure (Cont.)

- Hypertension Threshold: 24 hour average 130/80 mmHg
- Suggested by Head *et al.* (British Medical Journal, 2010)

Survey Methodology

- Target population: Adults aged between 20 and 65 in Goyang, a semiurban city (about 0.6 million)
- Sample design: single stage epsem LARDD and within-household random selection for high quality survey
- Sample size: 500
- Participant recruitment method: computer-assisted telephone interviewing (CATI) at Survey & Health Policy Research Center
- Survey period: about 6 months, April to October, 2011