

Skateboard Injuries in a Campus Community

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LAST spring, Ann Arbor and many other communities were visited by a recreational mania called "skateboarding."¹ Certain features of the sport, namely: (a) timing, and (b) extent and patterns of skateboard injury, seemed to lend themselves to an epidemiological approach.

a. *Timing of the sport* and its impact on this campus community was, literally *no* accident! Many of the classic features of an acute infectious process were simulated, including an explosive "common-source" epidemic curve (Figs. 1, 2, 3).⁵ Agent-host-environment relationships were also quite analogous:

- Agent— the profiteering dealer who sold the first 500 skateboards to sororities as spring party favors;
- Hosts— the pool of susceptibles among exam-stressed students;
- Environment—the enticement of a late but balmy spring; many paved hilly slopes, glamorous advertising, and an ample supply of skateboards.

b. *Extent of injury* tended to be exaggerated or minimized by partisans, although the severity of cases seen by orthopedic surgeons was well-documented.³ Two popula-

tion surveys were made to estimate morbidity:

1. A study of admissions for falls in 21 midwestern hospitals reporting to the Professional Activity Study (PAS). There was a considerable increase in hospitalizations of youngsters for falls in 1965 compared with two preceding years in a large sample of hospitals (Fig. 4). This evidence is circumstantial because specific skateboard etiology was not coded; nonetheless, the data are impressive because of the relatively low rates of hos-

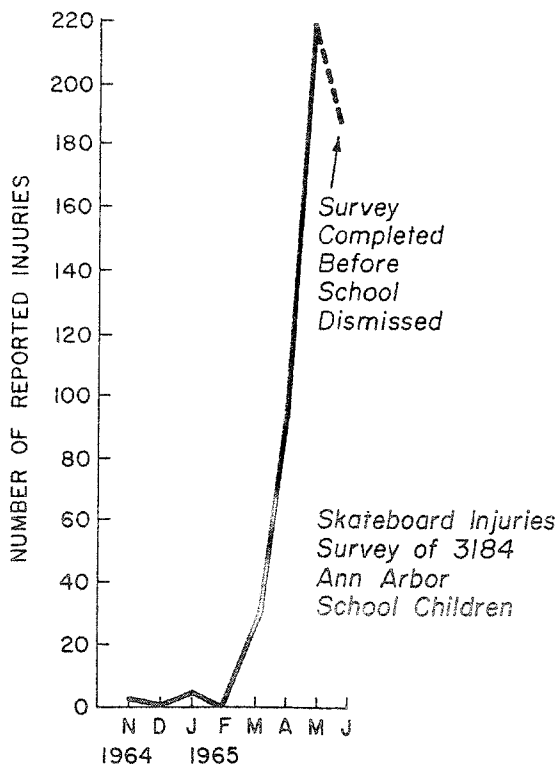


FIG. 1. Skateboard injuries survey of 3,184 Ann Arbor school children.

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Paper prepared for Research Symposium on Child Safety, April 21-22, 1966. University of Virginia School of Medicine (Prof. R. J. Meyer), Charlottesville, Virginia.

SKATEBOARD INJURIES

pitalization from skateboard injury indicated from the school survey.

2. A questionnaire survey of 3,184 Ann Arbor schoolchildren, conducted in six schools in June, 1965. Although ages ranged from seven to 17 years, the emphasis was on reaching the junior high school group, whose responses to the questionnaires approached 85 per cent (Table 1). Onset of school vacation prevented any serious validation of the questionnaire; the results are presented for *patterns* suggesting further more precise study.

It is *not* surprising that 16 of 21 fractures reported (77%) were in boys, nor that the numbers of reported injuries correlated very well with the number of times skateboards were used. In contrast

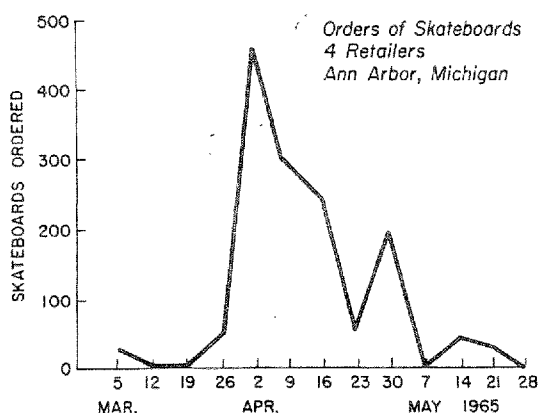


FIG. 2. Orders of skateboards, four retailers, Ann Arbor, Michigan.

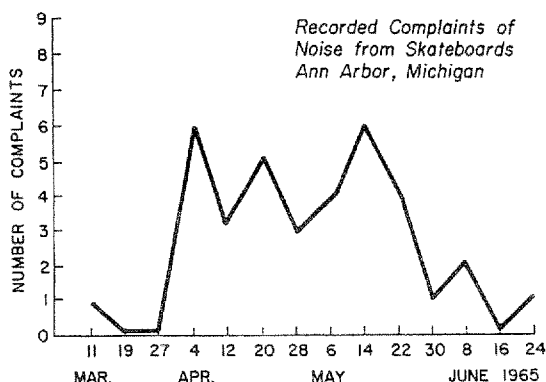


FIG. 3. Recorded complaints of noise from skateboards, Ann Arbor, Michigan.

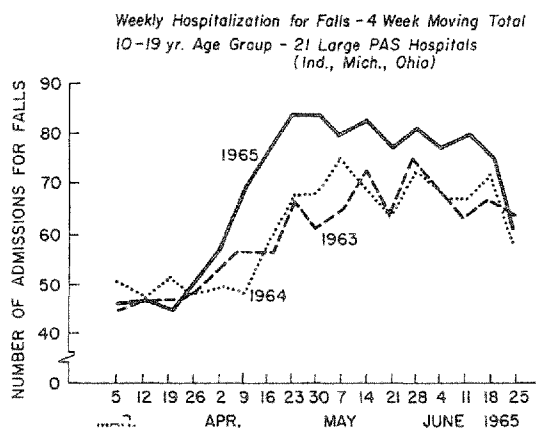


FIG. 4. Weekly hospitalization for falls—four week moving total.

to the high rate of injury (24.8%), less than 1 per cent of skateboarders received fractures. Only 2.7 per cent of the injuries required professional treatment.

TABLE 1. Results of Survey of Ann Arbor Schoolchildren, June, 1965

Age in Years	Number				Exposure: Average Person-Times	Proportion: $\left[\frac{\text{Fractures}}{\text{Injured}} \right]$	Proportion: $\left[\frac{\text{Fractures}}{\text{Skaters}} \right]$
	Respondents	Skaters	Injured	Fractures*			
9	151	93	21	1	4.9	0.05	0.01
10	192	142	32	3	5.3	0.09	0.02
11	205	151	45	4	5.4	0.09	0.03
12	190	156	43	1	5.9	0.02	0.006
13	675	570	166	5	6.0	0.03	0.01
14	550	455	82	1	5.5	0.01	0.002
15	511	417	105	4	5.7	0.04	0.01
Totals	2,474	1,984	494	19*	5.65	0.039	0.01
Per cent	100.0	80.0	24.8	0.96	—	—	—

* Two additional fractures in ages 16 and 7 not listed here. Two additional fractures in age group 11 not listed, because they occurred 24 and 48 hours after the survey, according to teachers.

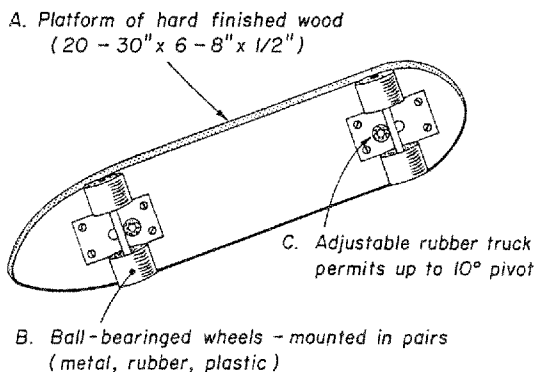


FIG. 5. Skateboard.

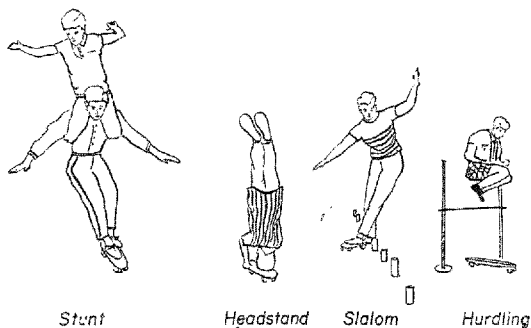


FIG. 6. Skateboarding, illustrated.

Although small numbers limit the value of age-specific rates, it is evident from Table I that seven of 19 fractures occurred in the age groups ten and 11; thus 37 per cent of the fractures occurred in 15 per cent of the skateboarders. It is noteworthy that in another series of 33 skateboard fractures reported

from another campus community, the two most severe fractures were in a boy aged 11 (skull fracture) and a boy aged 12 (compound fracture).¹

These data suggest that, even within a relatively narrow age group (9-15 years), the hazards of skateboarding may *not* be equally distributed. As is well known, a year or two difference in chronologic age can make a significant difference in coordination and margins of safety.⁴ Risk-taking behavior, cheaper and inferior equipment, and other factors may contribute to injuries being more severe in ten- to 12-year-old boys than in those a little older.

Acknowledgment

The above data could not have been collected without the cooperation of the Ann Arbor School District, the University School, the Parochial Schools of Ann Arbor, and the Commission on Professional and Hospital Activities (P.A.S.).

References

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