

# SOME CURRENT TRENDS OF TANNING IN KANSAS: USING GOOGLE MAPS AND BEHAVIORAL ECONOMICS TO EXPLORE TRAVEL BASED INTERVENTIONS



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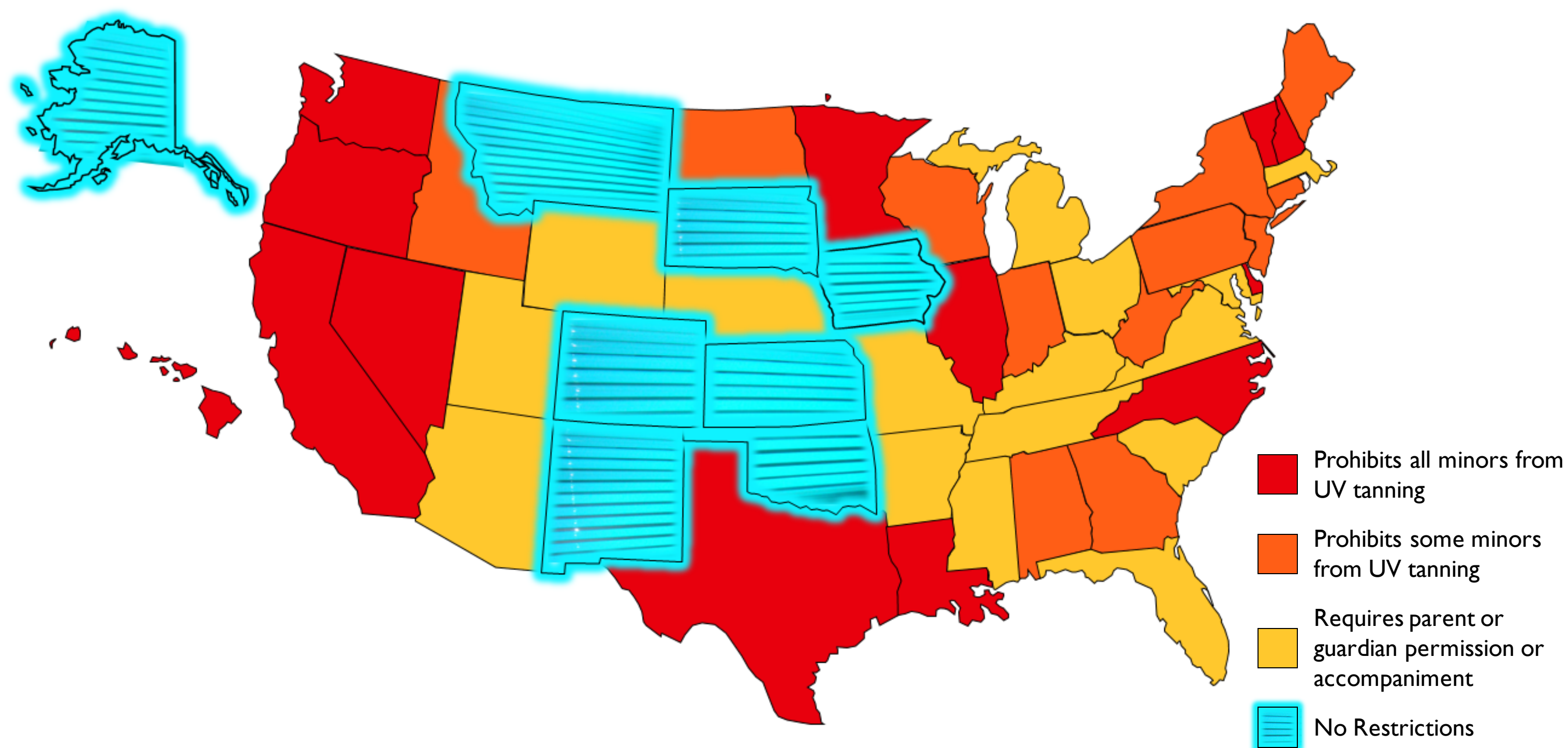
## RATIONALE

A new “Bronze Age” has dawned across America, particularly in the Midwest (Hoerster et al., 2009). Each year, nearly 30 million Americans will expose themselves to harmful radiation from ultra-violet indoor tanning (Fisher & James, 2010; Woo & Eide, 2010).

**70%** of tanners are Caucasian females between the ages of 16 and 29 (Dellavalle, Schilling, Chen, & Hester, 2003).

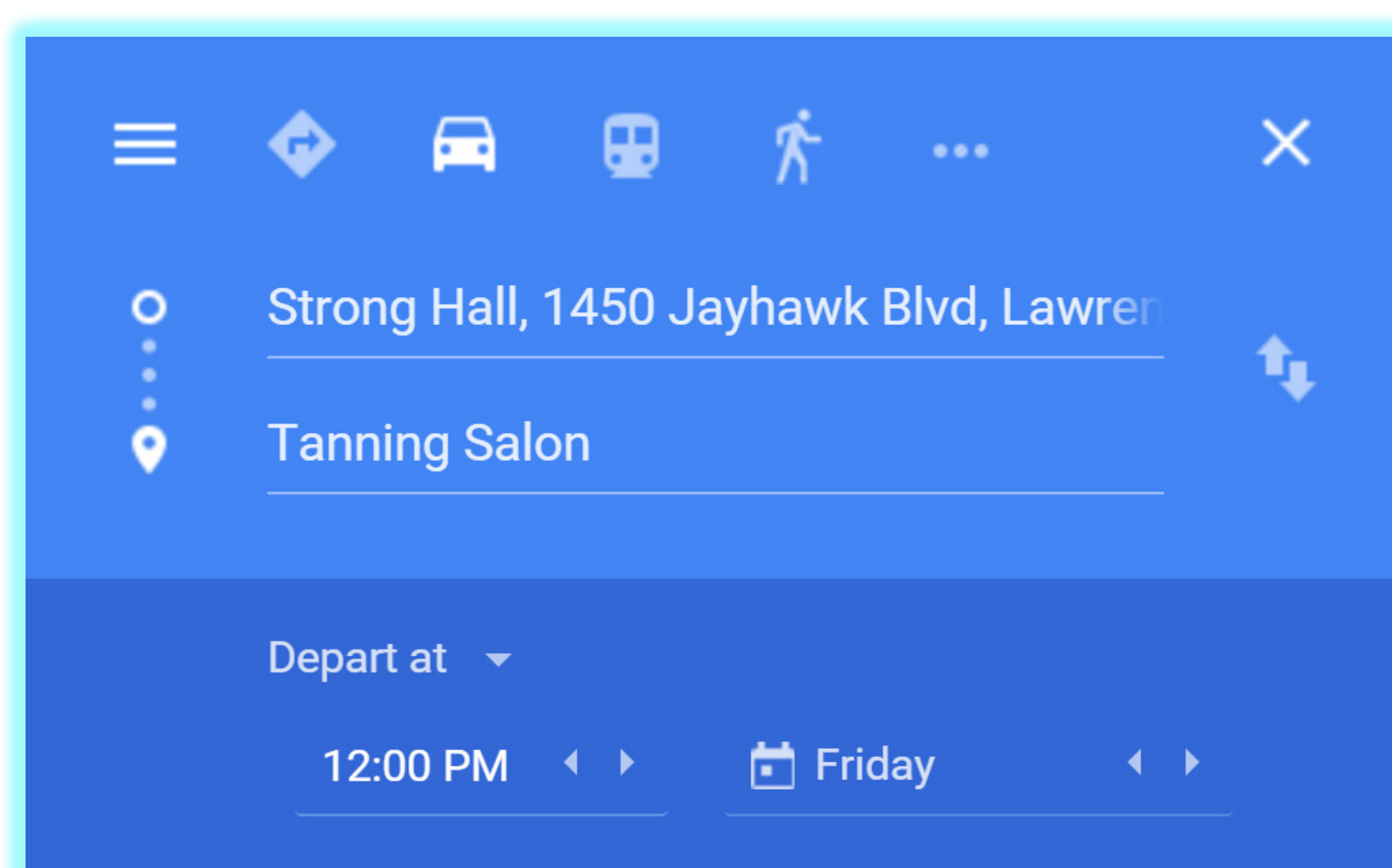
Increase in risk of developing melanoma for first time tanners under the age of 25 (Vehner et al., 2012): **102%**

Kansas is currently 1 of 8 states that does not have any restrictions on ultra-violet indoor tanning (see map below; adapted from <http://www.ncsl.org/>)



## METHOD

Main street address of the school/university was used in Google Maps to estimate the distance (miles) and driving time (minutes) to reach each tanning salon.



Distance and driving time data were recorded for all tanning salons within a 10 mile radius of the high school and 5 mile radius of KU.

Driving time was estimated by constraining departure time from school to 12:00pm on Friday.

## RESULTS

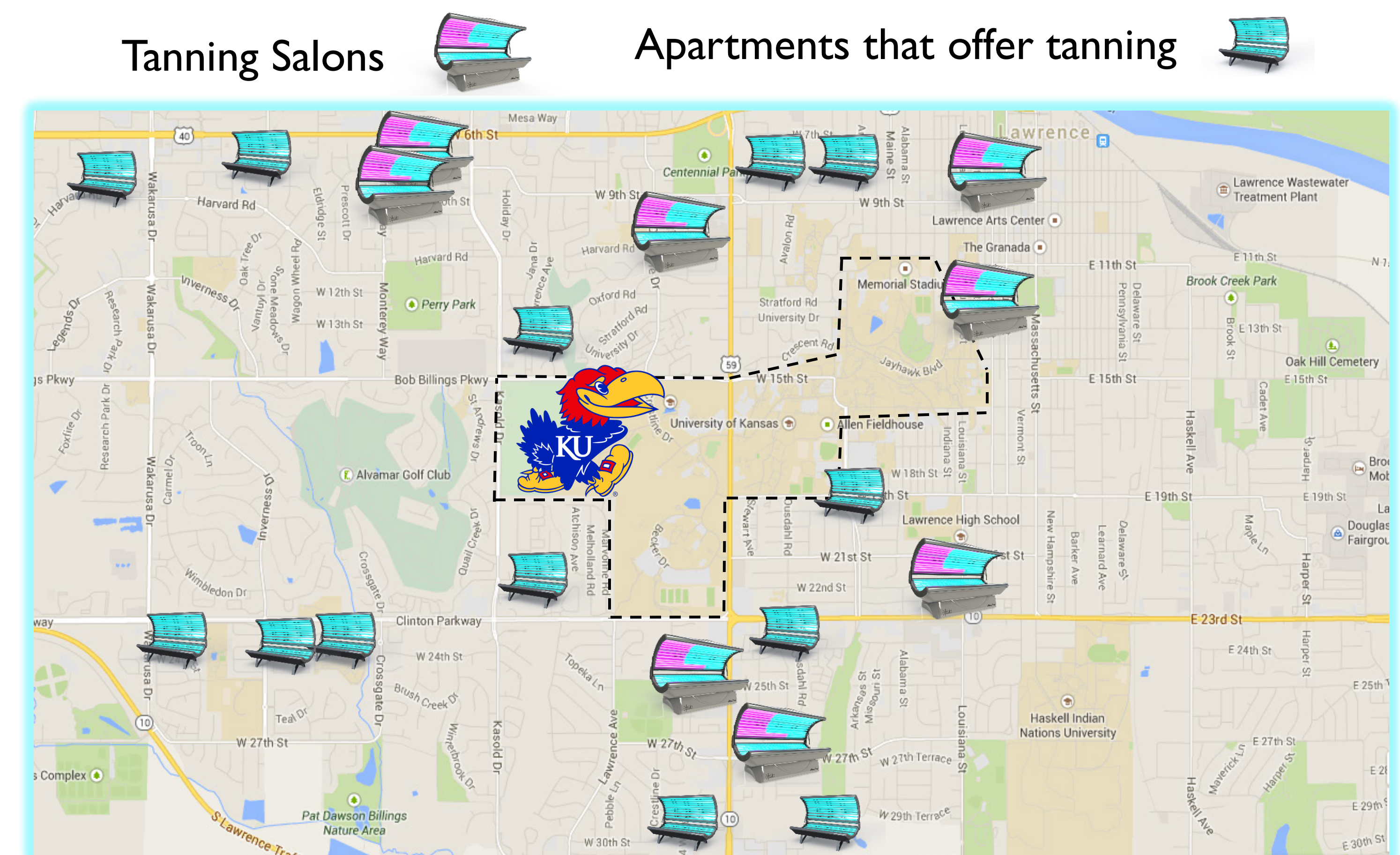


Figure 1. Tanning salons and apartments that offer tanning in Lawrence, KS

Table 1.

Tanning salons within 5 miles of the University of Kansas and 10 miles within the 5 largest high schools in Kansas.

Name of School	City	Students (#)	Females (%)	Tanning Salons (#)	Avg. Distance from School (mile)	Avg. Time from School (min)
University of Kansas	Lawrence	27,983	50	8	2.1	7.3
East High School	Wichita	2,278	50	5	4.6	10.0
Olathe North Sr HS	Olathe	2,202	52	18	5.6	13.3
Olathe East Sr HS	Olathe	2,128	49	22	4.3	8.8
Garden City HS	Garden City	2,080	49	2	2.2	7.5
North High School	Wichita	2,041	47	28	6.0	13.5

## DISCUSSION

It is estimated that the tanning salon industry is reaping profits of \$5,000,000,000 each year (Levine, Sorace, Spencer, & Siegel, 2005).

Tanning salons have become prevalent across the country (Hoerster et al., 2009) and are widespread near high schools and university campuses (Heckman et al., 2015).

Future studies should investigate individuals’ demand for tanning as a function of travel-based constraints.

Interdisciplinary collaborations, especially using the behavioral economic and geographic information system framework, may help guide public policy interventions for ultra-violet indoor tanning.