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Using a statistical model to locate orthodontic underserved areas capable of supporting practices in Kentucky.

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USING A STATISTICAL MODEL TO LOCATE ORTHODONTIC UNDERSERVED AREAS CAPABLE OF SUPPORTING PRACTICES IN KENTUCKY

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DEDICATION

This thesis is dedicated to my wife, who allowed me to spend countless Saturdays researching demographics and geography instead of being useful around the house. Thank you for your patience, understanding, and support during this long journey.

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ABSTRACT

USING A STATISTICAL MODEL TO LOCATE ORTHODONTIC UNDERSERVED AREAS CAPABLE OF SUPPORTING PRACTICES IN KENTUCKY

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Background: Malocclusion can affect an individual's quality of life. Unfortunately, access to orthodontic treatment is limited for many children. Access is improved when orthodontists select practice locations where their services are most needed.

Methods: A statistical model was applied to demographic and dental practice data in Kentucky to determine underserved areas that have the capacity to support additional orthodontic practices. All zip codes and practices were mapped using a geographic information system (GIS).

Results: The model identified 30 underserved zip codes with practice-supporting capability, but this number fell to zero after additional verification. Sixteen counties (13.3%) contain areas located more than 30 miles from the nearest practice. Fifteen counties (12.5%) contain areas located more than 50 miles from a Medicaid orthodontic provider.

Conclusions: Kentucky does not have a shortage of orthodontic practices, but certain regions could benefit from additional Medicaid providers. The statistical model, in conjunction with GIS, can assist in assessing practice site viability.

TABLE OF CONTENTS

LIST OF TABLES

vii

LIST OF FIGURES

CHAPTER I

INTRODUCTION

A. Introduction

1. Malocclusion Affects Quality of Life

Malocclusion is not only a cosmetic problem for many American children, but it can also affect speech, mastication, psychological health, and overall oral-health related quality of life[1-9]. The psychosocial impact of an individual's perception of his or her smile as unattractive can lead to decreased confidence and self-esteem[5, 6]. Malocclusion can also lead to functional problems related to chewing, speaking, and even breathing—making these actions more difficult, albeit not impossible. Additionally, certain malocclusions may result in trauma to the oral tissue, including stripping of the gingiva and periodontal defects[7].

2. Access to Orthodontic Treatment

Orthodontics can correct malocclusion and provide significant improvements in oral-health related quality of life, but access to orthodontic care is limited for some populations. Some children lack access to treatment because of geographic barriers, as they may live in rural areas located a considerable distance from the nearest orthodontic practice; other children may have transportation issues due to parents who are unable to take time out of work each month for appointments. Economic barriers are another major impediment

to treatment, as many families lack funds necessary to secure care[10, 11]. Disadvantaged children who qualify for Medicaid may receive Medicaid-sponsored orthodontic care; however, many orthodontists do not participate in the Medicaid program, and thus parents must sometimes drive long distances to locate a Medicaid provider[12]. Programs such as Smiles Change Lives® and Smile For a Lifetime™ are also available to help underprivileged children receive treatment, but limited funding and the difficulty of locating a nearby participating orthodontist leave many children without care[13].

Studies have reported that certain populations are generally less likely to receive orthodontic treatment than others; such disparities have been linked to gender, ethnicity, and socioeconomic status. For example, male children have been reported to be less likely than females to obtain orthodontic treatment. Similarly, Black and Hispanic children have been reported to have lower odds of receiving orthodontic treatment than White children—although among adults, these ethnic and racial disparities may disappear after adjusting for other covariates[14]. Children from low-income families, children with no insurance, and children eligible for Medicaid are also less likely to have initiated orthodontic treatment than children with private insurance[10, 15-18].

3. Establishing a Practice in an Underserved Area: A Win-Win Situation

Access to orthodontic care is improved when orthodontists select practice locations where their services are most needed—benefitting both patients and orthodontists. However, for orthodontists to set up practices in underserved areas, they must first know where these areas are, and subsequently determine

whether these areas will be able to financially support their practice and be profitable. In essence, improving geographic access to care and promoting successful orthodontic start-up practices are two versions of the same thing. Underserved areas, by definition, have little competition, and could be financially rewarding for orthodontists while also increasing access to care for the underserved population. For the orthodontist, the selection of a practice-location site may be the most important business decision, greatly contributing to the success or failure of a start-up venture[19-21]. The key to a good practice location is the identification of an area of need, so the orthodontist may use his or her skills where services will be sought. A poor choice could bring years of unnecessary economic hardship and even bankruptcy for the orthodontist. For patients, a new orthodontic practice location in a previously underserved community can be a significant benefit, allowing some who otherwise could not receive treatment to be served—especially if the new practice participates in the state's Medicaid program or a private charitable program. A new practice may also help patients and their parents avoid a potentially long and inconvenient car ride to the nearest provider.

B. Literature Review

1. Identifying Underserved Areas for Practice Sites

To help orthodontists select practice locations in relatively underserved areas, demographic variables considered favorable to a new practice site have been identified, and statistical and mathematical models have been proposed. These models have progressively become more sophisticated over the last thirty

years. In 1980, Gottlieb proposed a mathematical formula which could be used to estimate how many patients an orthodontist could plan on treating in one year in any given area, based on local demographics[22]. This formula relies mainly on orthodontist-to-child ratios, specifically children between 7-17 years old. Other studies have produced lists of variables considered important for an area to be able to support an orthodontic practice[23, 24]. Paul suggested that practitioners apply a site selection model which was originally developed for a general service firm, and which utilizes both objective and subjective criteria, to practice location[20]. Recently, Solomon and Ceen proposed a statistical model to help orthodontists determine whether an area has the typical characteristics associated with an orthodontic practice in the United States[25]. Their model is based on national demographic data and uses zip codes as the unit of analysis. Solomon and Ceen determined seven demographic variables which could best predict, using discriminant analysis, whether a zip code contains an orthodontic practice. They found that their model was accurate 90.3% of the time in predicting group membership.

As more orthodontists utilize objective demographic analyses in practice site location, underserved areas are likely to benefit. Recently, due to the economic recession that began in late 2007, more practitioners have been postponing retirement, thus creating an environment where fewer practice opportunities are available for graduating residents[26]. In addition, more orthodontists are graduating each year as a result of an increase in the number of accredited orthodontic residency programs nationwide[27, 28]. Another factor

influencing the orthodontics profession includes an increase in the number of general dentists providing orthodontic treatment with clear aligners, thus decreasing the number of referrals that were received by orthodontists in past years[29, 30]. Lastly, a gradual decrease in the U.S. birth rate over the last 20 years has resulted in a decreased number of teenagers available for orthodontic treatment[29]. As a result, competition among orthodontists has increased, and more orthodontic residents are considering employment opportunities outside of their geographic preferences and are looking at objective demographic analyses in deciding where to practice[19, 25]. As competition among orthodontists in metropolitan and suburban areas increases, orthodontists will likely look toward more underserved areas to practice, thus improving access to care for many communities located outside of metropolitan areas.

Research regarding practice location decision-making among dental professionals has a long history, and has become increasingly complex and objective. Orthodontists have not always used objective analyses in their practice location decisions. In the 1970s, dental students were characterized as irrational in their practice location decision-making, choosing often to locate in the town or community where they grew up[31, 32]. In the 1980s, objective analyses of demographics began to be utilized as an adjunct tool in location choice, although most of these analyses focused on simple orthodontist-to-population ratios[22]. In the 1990s, many authors advocated the need for more formal practice location planning tools and suggested using geographic information system technology and statistical models[20, 21]. Today, some demographers use algorithms of data to

divide populations into different lifestyle "clusters" in order to provide practitioners with a better understanding of how a practice in a given area will be utilized by its residents[33]. As more sophisticated demographic tools and models are at the disposal of practitioners, more uniform distribution of orthodontists among populations is possible, benefiting both patients and practitioners.

2. Limitations of Statistical Models

Using a statistical model to locate a practice site has inherent limitations. Models are based on current demographic estimates, which are subject to error. Another limitation involves varying utilization rates of orthodontic services by area, which may be due to various cultural factors, presence of third party insurance programs, and other unknown variables. Solomon and Ceen state that the premise of their statistical model is that orthodontists as a group generally achieve financial success, thus inferring that most orthodontists chose locations with favorable characteristics. As a result, their model assumes that current practice location characteristics can be used to suggest potential areas for new locations.

3. Geographic Information Systems

In order to have real practical value, results of a statistical model must be verified by entering the data into a geographic information system so that areas surrounding a location of interest may also be analyzed. For example, a model could identify a particular zip code as underserved, yet the possibility exists that the population simply travels to a nearby adjacent zip code to receive their care. Geographic information systems technology allows analysis of geo-spatial

relations to determine whether an area is truly underserviced. The mapping capability allows visualization of data in ways that may reveal new relationships and trends that might not be evident in other presentation formats, and the software also provides the ability to create presentation-quality maps. No previous studies have used a geographic information system to assess the viability of model-identified orthodontic practice sites.

The potential of geographic information systems to improve dental provider distribution has been recognized since the mid-1990s[21]. In addition to aiding practitioners in finding optimal practice sites, GIS has been used to gauge accessibility of services to the public, locate dental provider shortage areas in various states and countries, and identify future manpower needs[11, 34-38].

C. Significance

Uneven distribution of providers among a population can have negative consequences for both the providers and the population. In order to encourage providers to establish practices in underserved areas, providers must first become aware that such areas exist; additionally, they must obtain reasonable assurance that such areas have enough demand to adequately support their practice. By using a statistical model to identify underserved areas that can support their practices, practitioners have an objective gauge to assess the likelihood of success in any given area. Once an area is identified as truly underserviced, it can then be recommended for consideration by practitioners looking for a practice site with favorable demographics.

D. Purpose

The goal of this study is to apply the statistical model developed by Solomon and Ceen to Kentucky zip codes, in an attempt to locate underserved areas conducive to additional orthodontic practice sites and assess the utility of using a predictive statistical model based on zip codes. A geographic information system will be used to verify whether a model-identified "underserviced" zip code is truly underserviced. Orthodontic Medicaid providers will also be entered into the geographic information system to identify regional disparities and locate areas which could benefit from additional providers.

E. Hypothesis

The null hypotheses of this study are as follows:

1. Kentucky will not have any underserved areas identified by the model.

2. After analysis with GIS, any underserved areas will turn out to be adequately serviced.

3. Kentucky will not have any Medicaid orthodontic provider shortage areas.

CHAPTER II

METHODS AND MATERIALS

A. Sample

To locate orthodontic underserved areas and assess their capacity to support practices, it was necessary to secure accurate demographic data and dental and orthodontic practice data in the state of Kentucky. Estimates of 2011 demographic data for Kentucky at the zip code level were obtained from Geolytics. Geolytics is an industry leader in producing quality demographic data. Their estimates of population, income, and housing are derived from a complex modeling system based on annual and decennial US Census Data, actuarial tables, and US Post Office records of emigration and immigration. Estimates are verified for accuracy by applying controls, such as checking against county level data provided annually by the Census Bureau and other federal agencies. The demographic indicators relevant to this study include: population, percent of population without high school diploma, percent of population with college degree, median housing value, median household income, and percent of population under 18. All variables are estimated to be accurate as of 2011, except for median housing value which is estimated to be accurate as of 2010.

Practice locations of all dentists and orthodontists in the state of Kentucky were obtained from American Medical Information, a division of infoUSA. These

data are meticulously maintained and updated once a month for additions or deletions. Addresses and telephone numbers are also verified once or twice a year by phone. These data include the specialty status of the dentist, but do not differentiate between primary and satellite offices. Thus, the analysis in this study is based on orthodontic practices, not orthodontists. The data are estimated to be accurate as of December 2010.

B. Inclusion/Exclusion criteria

Only zip codes fully contained within the state of Kentucky were included in this study. Because zip codes can traverse state boundaries, many zip codes that are partially contained within Kentucky were excluded. Similarly, only dental and orthodontic practices within Kentucky were included, notwithstanding many zip code areas near the state border are serviced by orthodontists in neighboring states.

C. Methods and Materials

After data were obtained, dental and orthodontic practice addresses were geocoded and placed on a World Street Map basemap using a geographic information system (ArcGIS 9.3, Esri Inc.). 2010 Census TIGER/line shapefiles (U.S. Census Bureau) of Kentucky counties and zip code tabulation areas (ZCTAs) were then layered on the basemap. ZCTAs are statistical geographic entities produced by the U.S. Census Bureau to overcome the difficulties in precisely defining the land area covered by a zip code. Because zip codes aren't required to be polygons and are difficult to map, ZCTAs were developed to represent the most frequent zip code in any given area and are built by

aggregating census blocks. 2010 Kentucky counties and ZCTAs are shown in the following:

Figure 1: 2010 Kentucky Counties and Zip Code Tabulation Areas
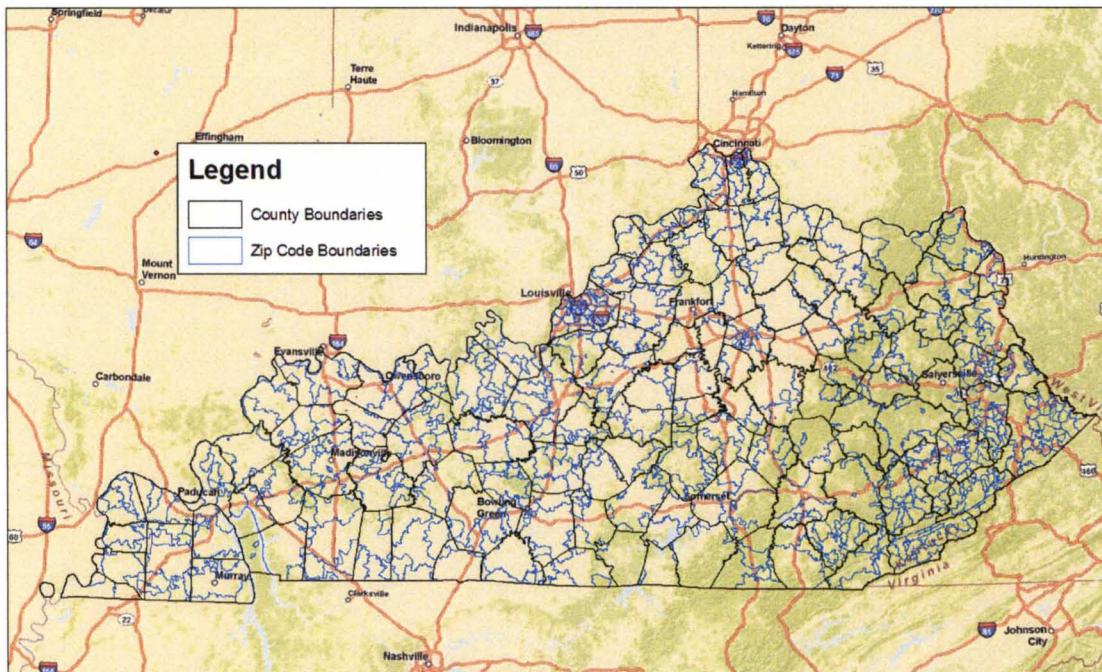
Demographic data were sorted and grouped to assemble the categories necessary to apply discriminant analysis, according to the model developed by Solomon and Ceen. In this study, discriminant analysis is used to determine whether each zip code has the characteristics associated with a typical orthodontic practice in the United States.

After classifying each Kentucky zip code by discriminant analysis, the data were joined to the zip code tabulation areas in ArcGIS. The actual presence or absence of an orthodontic practice in each zip code was then compared against the result of the predictive model. Zip codes which were predicted to have an

orthodontic practice yet currently lack a practice ("model-identified underserved zip codes") were analyzed to see whether a nearby adjacent zip code is servicing the zip code or whether the zip code area is truly underserved. Model-identified underserved zip codes lacking an orthodontic practice in an adjacent zip code were considered truly underserved. Model-identified underserved zip codes which are located adjacent to a zip code area containing an orthodontic practice were not considered underserved, although this does not mean the zip code could not support an additional practice. The mapping capability of a geographic information system helps determine whether a model-identified underserved zip code is truly underserved, or whether its population has access to care in a nearby adjacent zip code.

As a means of verification of the accuracy of the infoUSA database, the membership directory of the American Association of Orthodontists (AAO) was used to confirm the absence of orthodontic practices in areas identified by the model as underserved.

Thirty-mile buffers were placed around each orthodontic practice in order to visualize which portions of Kentucky do not have an orthodontic practice located within thirty miles. This function was accomplished using the ArcGIS buffer tool, which creates zones of equidistance around input features in order to visualize proximity.

A listing of orthodontists in Kentucky which accept Medicaid was obtained from the Kentucky Medical Management Information System. These providers' addresses were geocoded and layered on the Kentucky map. Fifty-mile buffers

were placed around each Medicaid provider's practice to allow visualization of areas located more than fifty miles from the nearest Medicaid orthodontic provider.

D. Statistical analysis

Discriminant analysis is a regression-based statistical technique used in determining which particular classification or group an item of data belongs to on the basis of its characteristics. In this study, discriminant analysis was used to classify each Kentucky zip code into one of the following groups, based on its demographic characteristics: no orthodontic practice, one orthodontic practice, and two or more orthodontic practices. In their study, Solomon and Ceen found these three groups to be statistically significant using a one-way analysis of variance (ANOVA) with a multiple range. A Group centroid of -.524 was identified for the group without an orthodontic practice; the group with one orthodontic practice had a centroid of 1.348, and the group with two or more orthodontic practices had a centroid of 2.747. Consequently, zip codes which have a discriminant score less than 0.41 (the midpoint of the first two group centroids) were placed in the group without an orthodontic practice. Those with discriminant scores greater than 2.05 (the midpoint of the second two group centroids) were placed in the group with two or more orthodontic practices. Zip codes which have a discriminant score greater than 0.41 and less than 2.05 were placed in the group with one orthodontic practice.

Table 1: Unstandardized discriminant function coefficients used to calculate

discriminant scores, as presented by Solomon et al[25]

Variable	Function I
Number of general dental practices	.1098800
Population (square root of)	.00968413
Percent of population without high school diploma	-.9717734
Percent of population with college degree	1.0845764
Median housing value	.0000023
Median household income	.0000089
Percent of population under 18	-1.1681554
(Constant)	-1.0952684

RESULTS

A table containing the demographic variables and practice data used to derive discriminant scores for each Kentucky zip code may be found in the appendix.

The following table contains the mean, minimum, and maximum values of Kentucky zip codes for all variables used in calculating discriminant scores:

Table 2: Mean, Minimum, and Maximum Values of Kentucky Zip Codes for Variables Used in Discriminant Analysis

	Number of Dental Practices (InfoUSA)	Number of Ortho Practices (InfoUSA)	Number of Ortho Practices (AAO)	Population	Median Household Income	% Population Under 18	% Population Without High School Diploma	% Population With College Degree	Median Housing Value	Discriminant Score	Minimum Predicted Number of Orthodontists
MEAN	1.55	0.191	0.211	5671	36177	0.2042	0.3312	0.1490	43815	-0.347	0.179
MIN	0	0	0	1	10381	0	0	0	0	-1.6589	0
MAX	41	8	5	56855	111698	0.3141	0.6259	0.866	275970	6.2109	2

The following is a choropleth map displaying Kentucky zip codes by the number of orthodontic practices which they should be able to support, according to the model. Existing orthodontic practices in Kentucky (as listed in the infoUSA database) are also displayed:

Figure 2: Number of Predicted Orthodontic Practices By Zip Code
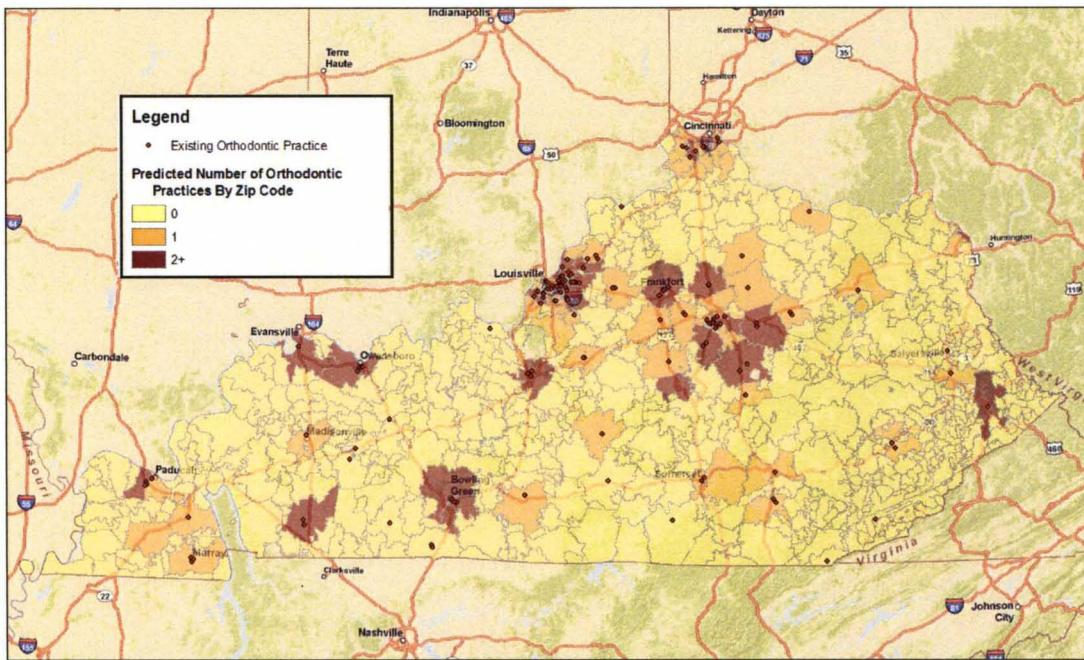
The model identified 30 out of 768 Kentucky zip codes which initially appear to not have an orthodontic practice and be capable of supporting an additional orthodontic practice; thus, the null hypothesis that Kentucky would contain no model-identified underserved areas was rejected. For verification, each of these zip codes was cross-checked with the AAO membership directory to confirm absence of an orthodontic practice. This procedure revealed that 10 of the 30 zip codes actually contain an orthodontic practice that was not listed in the original database. Using ArcMap, the remaining 20 zip codes were analyzed, and each one was found to be adjacent to a zip code containing one or more orthodontic practices. Thus, all of the model-identified underserved areas are actually adequately served, either by an orthodontic practice in an adjacent zip code or by a practice that exists in the area but was missing from the initial database. The null hypothesis that any model-identified underserved zip codes would turn out to be adequately serviced was accepted.

Of the 20 model-identified underserved zip codes, seven are contained in the Louisville metropolitan area. A choropleth map of the greater Louisville area

displaying predicted number of orthodontic practices in each zip code as well as existing orthodontic practices is shown in the following:

Figure 3: Number of Predicted Orthodontic Practices By Zip Code, Greater Louisville Area
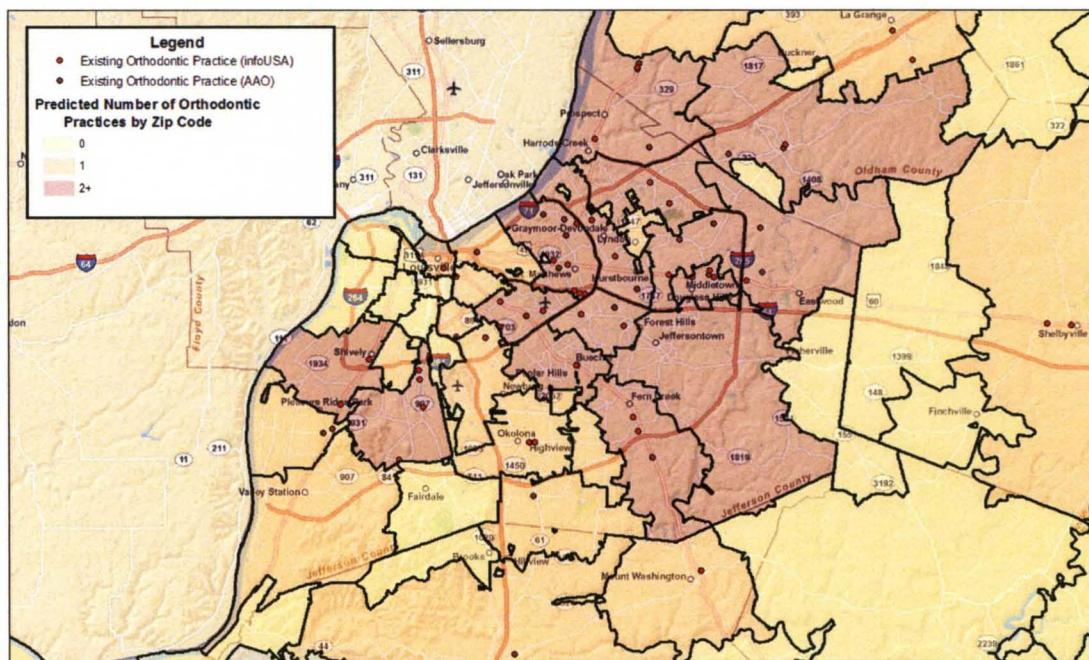
Five of the 20 model-identified underserved zip codes in Kentucky are contained in the greater Lexington area. The following map displays predicted number of orthodontic practices according to the model, as well as existing orthodontic practices in Lexington:

Figure 4: Number of Predicted Orthodontic Practices By Zip Code, Greater Lexington Area
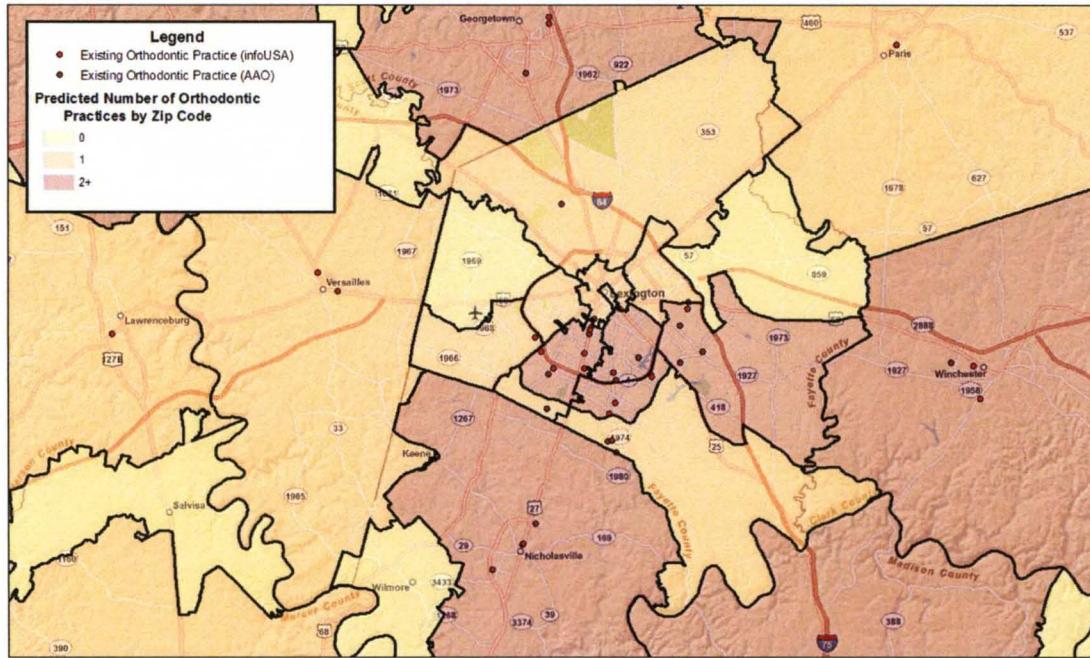
Sixteen of Kentucky's 120 counties (13.3%) contain areas that are located more than 30 miles from the nearest orthodontic practice. However, 11 of these 16 counties border an adjacent state and would likely be served by an orthodontic practice in that bordering state rather than by a Kentucky orthodontic practice. Areas located more than 30 miles from the nearest orthodontic practice are displayed in the following map in red:

Figure 5: Areas Located >30 Miles from Orthodontic Practice
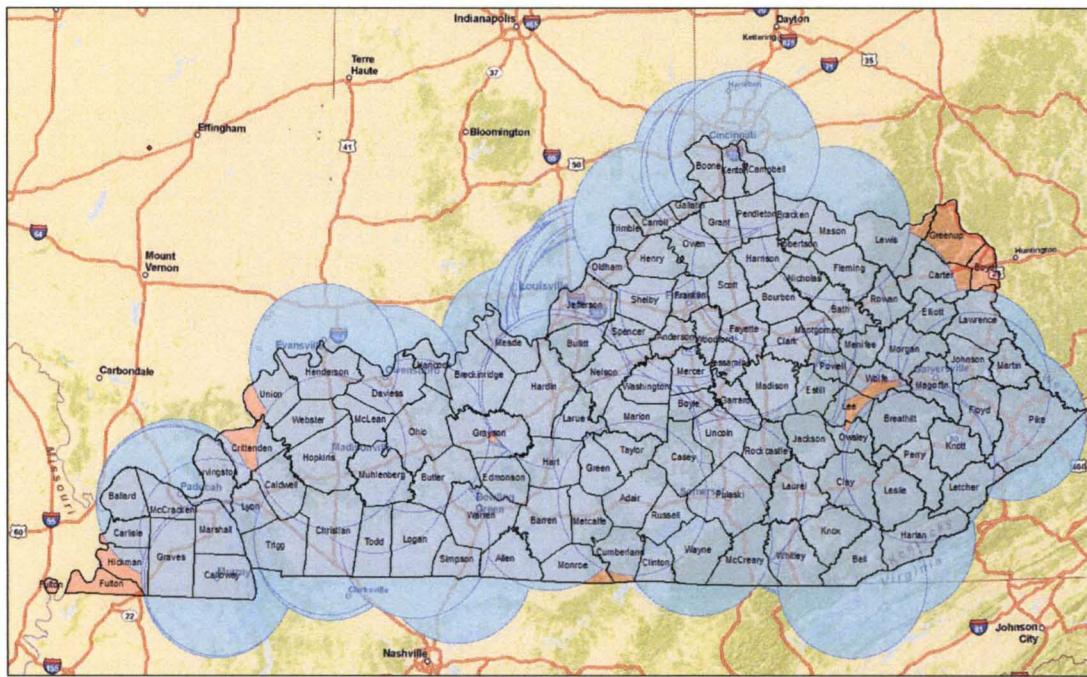
Fifteen of Kentucky's 120 counties (12.5%) contain areas that are located greater than 50 miles from a Medicaid orthodontic provider. The null hypothesis that Kentucky would not have any Medicaid orthodontic provider shortage areas was thus rejected. Shortage areas include seven counties in southern Kentucky and six counties in eastern Kentucky, as well as portions of two counties in western Kentucky. These areas are displayed in red in the following map:

Figure 6: Areas Located >50 Miles from Orthodontic Medicaid Provider
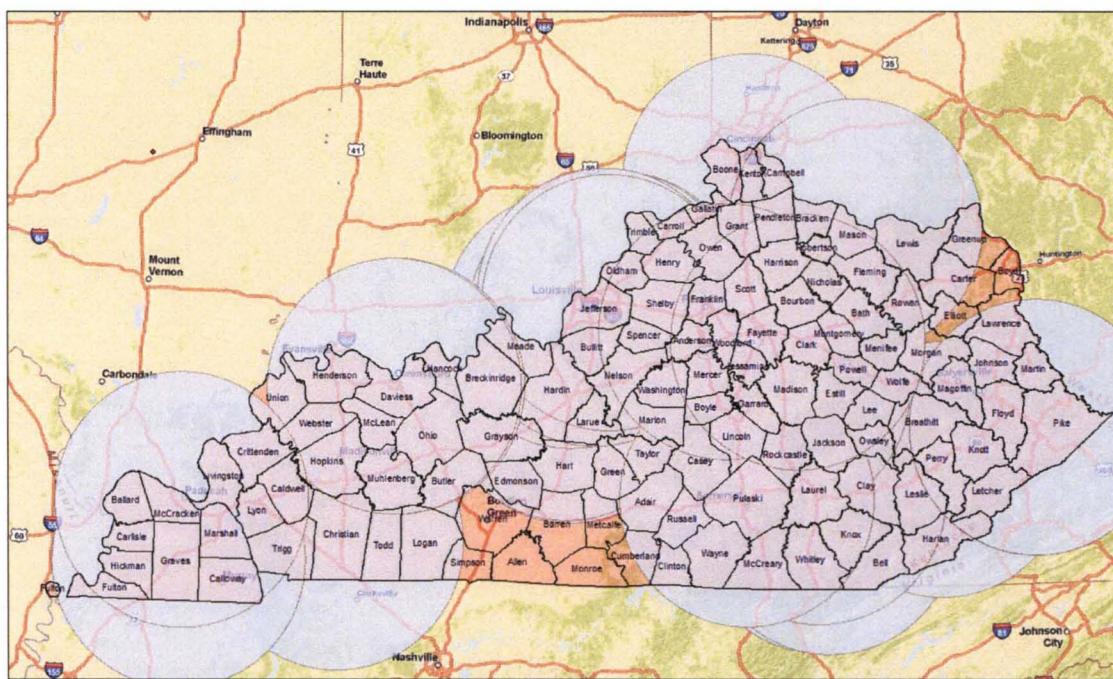
CHAPTER IV

DISCUSSION

Kentucky does not appear to have an inadequate number of orthodontic practices. According to the statistical model developed by Solomon and Ceen, thirty Kentucky zip codes were deemed to have the characteristics capable of supporting an orthodontic practice yet lacked a practice. However, after verifying the absence of practices in these zip codes with an alternate database and analyzing them using geographic information system software, all thirty zip codes were found to be adequately serviced either by an existing practice which was not listed in the original database, or by one or more practices in an adjacent zip code. Thus, according to the model, there appear to be no opportunities in Kentucky for an orthodontist to set up a practice where there is yet an unfulfilled demand and capacity to be supported. These findings do not suggest that an orthodontist will be unsuccessful by setting up a new practice, but only that current zip code tabulation areas seem to be adequately served by existing practices or by practices in adjacent zip codes. However, the twenty model-identified underserved zip codes that currently lack a practice may still be viable practice sites.

As one may see from looking at Figure 2, providers have distributed themselves across all regions of the state where they are likely to be adequately

supported. The geographic information system is a valuable asset in analyzing the distribution of providers and identifying potential shortage areas. In Kentucky, geographic shortage areas of orthodontic providers appear to be few. As predicted, all of the underserviced areas are rural. These results are consistent with those of many other studies that have demonstrated provider shortage areas among rural populations[11, 35-38]. Proposed reasons for shortages in rural areas include strong financial disincentives for practitioners and a lower demand for oral health care[39].

The results of this study call into question conclusions from other studies that predict upcoming shortfalls in the number of orthodontic providers, or that assume an imbalance in orthodontist distribution[27, 40]. Perhaps due to the increase in general dentists providing orthodontics using clear aligners, or because of effects of the "new economy" born of the latest recession--or perhaps a combination—the shortfall in number of orthodontic providers necessary to treat the population has not occurred and is not expected to occur anytime in the next decade. On the contrary, recent estimates suggest that an "orthodontic recession" has arrived which may last until at least 2020[29]. In recent surveys, many orthodontists have reported having less work than they desire, as the number of case starts and active cases has declined in many practices[41]. A tendency toward professional saturation of orthodontists in the United States seems more likely than a shortage, which would be consistent with recent studies in other countries[42]. An imbalance in orthodontist distribution in Kentucky is not corroborated by this study, as orthodontists have established practices in all

areas of the state where they can be adequately supported, according to the model. Some isolated geographic areas lack access to a provider within 30 miles—as demonstrated in Figure 5--but these areas are few in number and size, and because of their rural locations, they affect a small number of Kentuckians. When the maximum distance from an orthodontic provider is increased to 40 miles, all of the identified shortage areas—except for a small portion of Kentucky's westernmost county, Fulton County—disappear. Fulton County, which borders Missouri and Tennessee, is likely served by orthodontic providers in those states. Additional studies are necessary to verify whether an imbalance in orthodontic provider distribution exists in other states.

Some areas in southern Kentucky and eastern Kentucky lack an orthodontic Medicaid provider. Children in portions of seven counties in southern Kentucky must travel more than 50 miles to reach the nearest Medicaid orthodontist, as do children in parts of six counties in eastern Kentucky. Each of these regions could benefit from an additional Medicaid provider.

Previous studies have addressed why some orthodontists choose not to participate in the Medicaid program. Reasons cited by orthodontists as deterrents to participate include low fee reimbursement, high appointment failure rate, difficulty collecting from Medicaid, loss of coverage during treatment, prior authorization requirement, payment delays, difficulty getting billing questions answered, uncooperative behavior from patients, tardiness to appointments, and last-minute cancellations[12, 43, 44].

A limitation of this study is the inherent inaccuracy of databases due to constant change. Although the infoUSA database is verified monthly for changes and its proprietors claim to meticulously maintain it, many deletions and inaccuracies were found. By using the AAO membership directory as a cross-validation tool, a more accurate database was assembled. However, some doctors choose to list their home address in the directory rather than a practice address, which complicates the ability to verify practice locations. Other potential verification sources, such as online search engines, white pages, and the Kentucky Dental Board directory, are also subject to inaccuracies. The online Medicaid provider directory, which was used as the basis for this study's Medicaid database, may also contain errors.

This study used zip code tabulation areas, rather than census tracts, as its geographic unit of analysis because a larger unit of analysis was needed to be able to predict whether an area could support an orthodontic practice. Zip codes generally contain larger populations than census tracts and are a larger unit of analysis. Because the typical orthodontic practice serves approximately 15,000-20,000 people, a unit of analysis that contains a relatively large population was necessary for the model to produce useful data. Census tracts are better units for geographic analysis than zip codes because they are more homogenous; however, a census tract typically only contains approximately 4000 people, which is an inadequate number to be able to predict whether an area could potentially support an orthodontic practice.

CHAPTER V

CONCLUSIONS

A. Summary:

The aims of this study were to apply a statistical model to Kentucky zip codes to identify underserved areas and assess their viability using a geographic information system, as well as to identify orthodontic Medicaid shortage areas. This study found that the statistical model significantly overestimates the number of underserved areas; the model identified 30 underserved zip codes which, after analysis with a geographic information system, were all found to be adequately serviced. Sixteen Kentucky counties contain portions that are located greater than 30 miles from the nearest orthodontic practice. Fifteen Kentucky counties contain areas that lack access to a Medicaid orthodontic provider within 50 miles.

B. Conclusions:

Kentucky has very few areas that have inadequate access to an orthodontic practice. However, certain areas lack a Medicaid orthodontic provider within a reasonable distance. A statistical model can be a useful adjunct in identifying potential practice sites when used in combination with a geographic information system.

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APPENDIX

Column Headings, From Left to Right:

Zip Code Tabulation Area, Number of Dental Practices (infoUSA), Number of Orthodontic Practices (infoUSA), Population, Median Household Income, Percentage of Population Under 18, Percentage of Population Without High School Diploma, Median Housing Value, Discriminant Score, Minimum Number of Orthodontic Practices According to Model, Number of Orthodontic Practices (AAO)

Zip	DntPr	OrtPr	Pop	HHInc	Under18	NoHSDip	WithColDeg	MdHVal	DiscScore	MnOr	AAO
40003	0	0	2021	58531	0.208312716	0.219476744	0.199854651	49430	-0.26537223	0	0
40004	9	2	28205	44260	0.235206524	0.181897255	0.225659147	82411	1.892957727	1	2
40006	0	0	4921	44921	0.223125381	0.316095471	0.13494492	67889	-0.28166997	0	0
40007	0	0	213	37402	0.197183099	0.22147651	0.11409396	22834	-0.89055623	0	0
40008	1	0	4036	47221	0.226709613	0.316672883	0.129056322	62464	-0.23943977	0	0
40009	0	0	1368	36554	0.218567251	0.385606874	0.099892589	38975	-0.84403382	0	0
40010	0	0	323	79460	0.278637771	0.126984127	0.407407407	4872	-0.21012986	0	0
40011	1	0	2944	44178	0.221127717	0.264093448	0.125444388	48848	-0.33391571	0	0
40012	0	0	399	46310	0.210526316	0.419708029	0.072992701	23787	-1.00979187	0	0
40013	0	0	6693	58492	0.215747796	0.213713268	0.162288513	65226	0.08368693	0	0
40014	9	1	22626	79460	0.256386458	0.096125239	0.417369129	130116	2.412766702	2	4
40019	1	0	4095	40981	0.233699634	0.297297297	0.149024024	68685	-0.2438742	0	0
40020	0	0	29	60093	0.206896552	0.052631579	0.157894737	3107	-0.62293525	0	0
40022	0	0	898	78115	0.197104677	0.24600639	0.236421725	64230	-0.17520602	0	0
40023	2	0	3564	90067	0.221099888	0.146189088	0.309870887	62351	0.582362318	0	0
40025	0	0	49	111698	0.12244898	0.025	0.65	0	0.504151149	0	0
40026	1	0	6875	88888	0.257890909	0.057218099	0.514484079	143249	1.138640856	1	0
40031	7	3	21617	50526	0.196789564	0.211828448	0.25576082	103480	1.624128916	1	1
40033	0	0	12526	33487	0.21571132	0.304609929	0.160874704	72717	0.080128118	0	0
40036	0	0	368	59742	0.203804348	0.271653543	0.098425197	12751	-0.74397847	0	0
40037	0	0	3055	42966	0.225859247	0.232363098	0.136161815	55298	-0.39261478	0	0
40040	0	0	511	49975	0.215264188	0.324637681	0.136231884	29196	-0.78382501	0	0
40041	0	0	250	39477	0.212	0.106508876	0.562130178	0	-0.33249387	0	0
40045	0	0	3817	50949	0.205396909	0.269390844	0.152478244	74463	-0.20880715	0	0
40046	0	0	2273	51278	0.212494501	0.26185835	0.141650422	27915	-0.46226458	0	0
40047	5	1	18972	56153	0.223329117	0.18028731	0.191300878	109781	1.309486415	1	1
40048	0	0	28	58492	0.214285714	0.055555556	0.222222222	0	-0.58694973	0	0
40049	0	0	10	42966	0.3	0	0	0	-1.03299371	0	0
40050	0	0	1310	37382	0.203816794	0.34939759	0.186199343	65533	-0.63721743	0	0
40051	0	0	4491	38679	0.219327544	0.248411902	0.138415246	58480	-0.31524622	0	0
40052	0	0	644	36452	0.215838509	0.284064665	0.122401848	6636	-0.90546822	0	0
40055	1	0	1747	46820	0.214653692	0.239388795	0.15959253	45080	-0.37113446	0	0
40056	0	0	2252	73679	0.210035524	0.145806452	0.370322581	112694	0.293621766	0	0
40057	0	0	3008	44925	0.214095745	0.261764706	0.123529412	52261	-0.41481729	0	0
40058	0	0	4	37382	0.25	0	0	0	-1.03548919	0	0
40059	9	2	15278	111500	0.23897107	0.043606424	0.682049197	275970	3.132168393	2	3
40060	0	0	1291	38650	0.213787761	0.257918552	0.139140271	69673	-0.59276123	0	0
40062	0	0	292	36452	0.232876712	0.21875	0.083333333	29895	-0.93106774	0	0

40063	0	0	39	46876	0.179487179	0.214285714	0.142857143	0	-0.8807407	0	0
40065	8	2	28741	60041	0.228140983	0.223467509	0.249618521	118063	2.015150813	1	3
40067	2	0	5931	74860	0.199291856	0.179222649	0.2871881	109084	0.69096905	0	0
40068	0	0	2888	49974	0.197368421	0.178321678	0.237762238	50285	-0.16058934	0	0
40069	3	0	8907	38931	0.203996856	0.281485116	0.199378476	73218	0.366238522	0	0
40070	0	0	604	41827	0.218543046	0.253694581	0.172413793	32980	-0.72420143	0	0
40071	2	0	14863	58866	0.221489605	0.230288365	0.171103045	107436	0.778178345	0	0
40075	0	0	1330	48130	0.215037594	0.239733629	0.119866815	50799	-0.55127597	0	0
40076	0	0	2634	53377	0.205770691	0.229961305	0.168601437	53630	-0.2810373	0	0
40077	0	0	540	47372	0.207407407	0.08401084	0.279132791	62631	-0.32595761	0	0
40078	0	0	1977	42449	0.194739504	0.391715116	0.114098837	60122	-0.63319186	0	0
40104	0	0	1516	40477	0.200527704	0.275238095	0.121904762	40617	-0.6342463	0	0
40107	0	0	2206	48885	0.201269266	0.229605263	0.136184211	57043	-0.38488522	0	0
40108	2	0	10985	43998	0.208921256	0.224266198	0.20289463	86139	0.486254265	0	0
40109	1	0	1587	44004	0.171392565	0.275474957	0.095854922	100534	-0.34125007	0	0
40110	0	0	43	58934	0.186046512	0.133333333	0.1	0	-0.74588214	0	0
40111	0	0	1357	32783	0.214443626	0.294307197	0.111707841	37791	-0.77540359	0	0
40115	0	0	664	27058	0.225903614	0.366742597	0.111617312	28925	-1.03783175	0	0
40117	0	0	2488	41755	0.22266881	0.265885256	0.145589143	30111	-0.53216271	0	0
40118	1	0	9475	43065	0.223007916	0.293745051	0.109263658	83267	0.103981902	0	0
40119	0	0	2042	38617	0.184622919	0.316757493	0.142370572	38633	-0.59436757	0	0
40121	0	0	10031	42589	0.309640116	0.071982681	0.321847375	58636	0.305649178	0	0
40140	0	0	1113	29844	0.222821204	0.347184987	0.103217158	23192	-0.93918745	0	0
40142	0	0	3015	45922	0.216915423	0.2765	0.116	42331	-0.45394757	0	0
40143	2	0	4928	40320	0.207386364	0.285164347	0.119040569	46930	-0.12015566	0	0
40144	0	0	3190	31437	0.209717868	0.285975331	0.122887163	34853	-0.5781722	0	0
40145	0	0	964	50792	0.237551867	0.422222222	0.1	27741	-0.85832078	0	0
40146	0	0	3425	30339	0.218686131	0.293525809	0.109798775	54768	-0.55436921	0	0
40150	1	0	3876	46377	0.191950464	0.329862402	0.107846783	80025	-0.21406094	0	0
40152	0	0	517	41921	0.189555126	0.293010753	0.112903226	23340	-0.83220258	0	0
40155	0	0	903	37715	0.194905869	0.290529695	0.101123596	59590	-0.73206821	0	0
40157	0	0	936	31884	0.204059829	0.264240506	0.056962025	29004	-0.88209407	0	0
40160	8	0	21692	44116	0.235432417	0.156510086	0.199605022	84081	1.58209022	1	1
40161	0	0	208	31884	0.201923077	0.257142857	0.028571429	48957	-1.01420934	0	0
40162	0	0	6127	60615	0.223110821	0.173043693	0.231794619	0	0.024620378	0	0
40165	6	0	34280	49400	0.211726954	0.264953955	0.157070316	103227	1.697082545	1	1
40170	0	0	405	43201	0.22962963	0.381481481	0.092592593	8787	-1.03444258	0	0
40171	0	0	303	43201	0.234323432	0.396039604	0.094059406	16194	-1.06176931	0	0
40175	2	0	12507	43770	0.222675302	0.184064609	0.197444552	67767	0.527079046	0	0
40176	0	0	810	31884	0.214814815	0.303867403	0.075506446	19331	-0.95597398	0	0
40177	0	0	2290	29315	0.19650655	0.342482845	0.095446039	51668	-0.71114857	0	0
40178	0	0	391	41981	0.191815857	0.308243728	0.11827957	24141	-0.8701443	0	0
40202	13	2	7106	11916	0.110188573	0.343690987	0.187639485	33916	1.069170846	1	1
40203	4	0	17825	17351	0.240841515	0.358295229	0.136140109	60079	0.446111713	0	0
40204	4	1	14941	38911	0.137072485	0.176480585	0.412779336	121279	1.267589726	1	0
40205	8	2	24570	65369	0.156532357	0.059550019	0.5662353	167941	2.639899671	2	3
40206	4	0	18491	40722	0.152128062	0.148619212	0.451408896	121224	1.468090144	1	0
40207	40	8	29270	55518	0.175264776	0.051318768	0.574021895	177401	6.210979923	2	4
40208	3	0	15050	23678	0.179003322	0.268248008	0.276215771	85401	0.658004202	0	0
40209	0	0	1734	34096	0.189734717	0.282714055	0.179321486	26351	-0.63002221	0	0
40210	2	0	13671	21196	0.239119304	0.33542929	0.111352464	44123	0.061374299	0	0
40211	4	0	24922	22573	0.255035711	0.301121265	0.1354592	56993	0.759589904	0	0
40212	4	0	17781	25823	0.242674765	0.385630237	0.102335532	49574	0.430383829	0	0
40213	7	1	16845	36400	0.199762541	0.221918977	0.226268657	87628	1.249735898	1	0
40214	12	4	45282	37041	0.214168985	0.228073014	0.185351803	103424	2.575864772	2	1
40215	8	0	21166	28452	0.247614098	0.300647273	0.114500409	64836	1.134404732	1	0
40216	20	2	39512	37931	0.21079672	0.237892634	0.140996707	85270	3.228463449	2	2
40217	10	1	12062	35463	0.153374233	0.194656489	0.270010905	83291	1.494749016	1	1
40218	10	1	32002	35952	0.222673583	0.163286098	0.290960452	81626	2.136279905	2	0
40219	9	3	36714	40994	0.213869369	0.217960561	0.18073015	88970	2.049328294	1	3
40220	24	3	32271	47087	0.178767314	0.096302884	0.407318003	127099	4.122691534	2	3

40222	19	2	22570	59722	0.168763846	0.077990944	0.520376549	181741	3.680698514	2	2
40223	14	2	22222	66373	0.202097021	0.062787832	0.534864111	155988	3.113475971	2	4
40228	3	0	17557	56316	0.219285755	0.137843121	0.260814141	96258	1.131517492	1	0
40229	6	0	37656	47510	0.235872105	0.209921799	0.177704464	89663	1.782910338	1	1
40231	0	0	86	27018	0.186046512	0.359375	0.140625	0	-1.17923107	0	0
40241	9	2	30903	79439	0.210432644	0.046001516	0.571868486	162552	3.002901191	2	3
40242	4	0	9712	53679	0.182660626	0.071926765	0.467596629	111926	1.255911569	1	0
40243	15	3	9478	59513	0.189702469	0.075292723	0.490884838	132723	2.562221853	2	4
40245	4	1	28218	95395	0.243071798	0.059054465	0.582139895	221095	2.616777428	2	1
40258	4	0	26102	47395	0.216726688	0.212331494	0.15243729	92373	1.247140636	1	2
40272	3	0	37906	43206	0.216219068	0.239390387	0.148964439	98435	1.405714047	1	0
40280	0	0	96	65992	0.135416667		0.866666667	0	0.368588195	0	0
40291	12	2	34723	60225	0.209025718	0.119858841	0.309078688	117824	2.804496862	2	1
40299	15	0	40905	65763	0.215377093	0.097833129	0.38730113	128428	3.459517237	2	0
40310	0	0	66	35908	0.212121212	0.204545455	0.136363636	34233	-0.91715477	0	0
40311	0	0	6515	36310	0.214121259	0.347982063	0.130044843	60819	-0.29802299	0	0
40312	0	0	5592	31436	0.226037196	0.485334058	0.056219446	63056	-0.62121614	0	0
40313	0	0	3210	28246	0.185669782	0.305346885	0.262041538	49070	-0.41194632	0	0
40316	0	0	229	35137	0.192139738	0.37654321	0.166666667	16623	-1.00756188	0	0
40322	0	0	3278	29641	0.199511897	0.445081606	0.076753419	48974	-0.74690379	0	0
40324	16	2	42398	61278	0.243714326	0.196485392	0.283157362	116761	3.295728078	2	3
40328	0	0	1193	46136	0.213746857	0.364864865	0.141277641	22465	-0.74974314	0	0
40330	5	1	19724	43394	0.210048672	0.259100007	0.17606939	88345	1.095226496	1	1
40334	0	0	40	29828	0.25	0.444444444	0.074074074	6500	-1.39745053	0	0
40336	3	0	12338	27442	0.204409142	0.411564226	0.09813139	54429	0.145793622	0	1
40337	0	0	5241	29828	0.232589201	0.410069849	0.067811409	63313	-0.57998036	0	0
40339	0	0	14	81749	0.214285714		0.333333333	0	-0.22047544	0	0
40342	6	1	21049	52300	0.221293173	0.203322729	0.188335101	95227	1.399105844	1	0
40346	0	0	532	29641	0.231203008	0.433048433	0.068376068	38415	-1.13672145	0	0
40347	1	0	2973	54336	0.193407333	0.19895288	0.376487387	105860	0.258186344	0	0
40348	0	0	213	29870	0.230046948	0.262411348	0.156028369	31013	-0.97150059	0	0
40350	0	0	280	43773	0.246428571	0.426966292	0.101123596	10213	-1.11350383	0	0
40351	7	1	20488	32771	0.16546271	0.277655384	0.288871086	82582	1.388931649	1	1
40353	10	2	21228	43978	0.216694931	0.262162722	0.193706438	85546	1.70070968	1	2
40356	13	3	42775	51445	0.233150205	0.211546732	0.249534117	125525	2.870001289	2	2
40358	0	0	803	25624	0.215442092	0.418943534	0.122040073	20781	-1.07163853	0	0
40359	3	0	7317	42930	0.210878775	0.31511254	0.125	67009	0.180572601	0	0
40360	0	0	7004	33893	0.22558538	0.389301634	0.140734451	64294	-0.32470067	0	0
40361	7	1	19142	39046	0.212099049	0.246683122	0.182813946	88724	1.273145142	1	1
40363	0	0	1	53911	0	0	0	3213	0	0	0
40370	0	0	3083	60332	0.209860525	0.215267899	0.184447606	47931	-0.16486688	0	0
40371	0	0	3147	22277	0.217032094	0.41350211	0.114861697	62590	-0.74078284	0	0
40372	0	0	2244	63843	0.187165775	0.197121402	0.182102628	65084	-0.13150577	0	0
40374	0	0	1717	22940	0.205591147	0.431623932	0.103418803	53590	-0.91421009	0	0
40376	0	0	184	26545	0.201086957	0.433070866	0.102362205	620	-1.27115899	0	0
40379	0	0	3619	65692	0.218292346	0.244462674	0.191960623	82683	-0.02244363	0	0
40380	0	0	6851	27376	0.208582689	0.402777778	0.113461538	69874	-0.40156552	0	0
40383	8	2	23196	56474	0.213053975	0.180630774	0.310608474	122620	1.952449006	1	1
40385	0	0	3002	42098	0.194870087	0.363112392	0.15129683	63394	-0.46079498	0	0
40387	0	0	2437	30779	0.202708248	0.428741093	0.1347981	48393	-0.73940262	0	0
40390	1	0	6637	43524	0.197227663	0.116345311	0.517528484	105249	0.650248635	0	0
40391	11	2	35404	47179	0.208592249	0.243243243	0.207700852	101803	2.330314098	2	2
40402	0	0	2419	25966	0.211244316	0.397103199	0.117079059	39728	-0.80238941	0	0
40403	7	1	23176	45082	0.204219883	0.280181372	0.229233579	77447	1.462368833	1	1
40404	0	0	194	51274	0.118556701	0.315789474	0.302631579	0	-0.62130543	0	0
40409	0	0	3760	18143	0.203457447	0.380422265	0.12706334	45048	-0.7061134	0	0
40419	0	0	4622	33770	0.225010818	0.416775457	0.115208877	40263	-0.58686318	0	0
40422	13	0	24594	36808	0.189273807	0.22332492	0.264054612	94155	2.239010189	2	2
40434	0	0	4	23334	0.25	0	0	0	-1.16051639	0	0
40437	0	0	4872	27131	0.202586207	0.386504883	0.102397159	34435	-0.60004488	0	0
40440	0	0	1578	34195	0.205323194	0.366079703	0.091751622	36660	-0.81821165	0	0

40442	0	0	1226	27131	0.2137031	0.422569028	0.06362545	15376	-1.07084165	0	0
40444	1	0	13968	43301	0.197666094	0.290111463	0.158809694	87687	0.405026294	0	0
40445	0	0	1215	14621	0.194238683	0.455075846	0.073512252	26655	-1.15587289	0	0
40447	0	0	8744	23334	0.204711802	0.479542819	0.087129369	43596	-0.49261663	0	0
40448	0	0	25	20026	0.2	0.388888889	0.055555556	0	-1.42010506	0	0
40456	1	0	9676	25495	0.202149649	0.427589299	0.101629054	52077	-0.22814205	0	0
40460	0	0	1099	17082	0.192902639	0.45691906	0.067885117	14356	-1.18510792	0	0
40461	0	0	3737	48239	0.209526358	0.256087981	0.24666143	45294	-0.19606968	0	0
40464	0	0	1356	39852	0.200589971	0.299363057	0.116772824	46264	-0.67635577	0	0
40468	0	0	1681	43394	0.205234979	0.25432526	0.216262976	55240	-0.43750486	0	0
40472	0	0	2487	25317	0.180538802	0.419662921	0.115730337	33654	-0.80297376	0	0
40475	15	2	56564	36137	0.181033873	0.211996428	0.298670371	106331	3.322688596	2	5
40481	0	0	120	22083	0.208333333	0.50617284	0.074074074	9281	-1.42641942	0	0
40484	2	0	13035	32194	0.219716149	0.309920182	0.143443558	59690	0.250688261	0	0
40486	0	0	2366	30361	0.210481826	0.508739076	0.084269663	48766	-0.89091082	0	0
40489	0	0	3562	32510	0.211678832	0.379182156	0.092110698	365	-0.74318037	0	0
40502	20	1	26730	46127	0.145491957	0.082646643	0.594080648	43734	3.582808054	2	0
40503	41	5	27673	53519	0.171683591	0.082646667	0.477623723	185425	6.144491735	2	3
40504	7	0	26674	29287	0.189023019	0.228691099	0.332146597	116308	1.697944686	1	0
40505	3	0	25754	34189	0.193639823	0.268464502	0.195597138	99580	1.045484333	1	0
40506	0	0	1008	20165	0.049603175	0.068527919	0.64213198	82612	0.153523059	0	0
40507	1	0	2487	17217	0.087253719	0.219165085	0.358159393	43954	-0.17504971	0	0
40508	8	1	22862	19052	0.118799755	0.244821943	0.390766973	98292	1.6875382	1	1
40509	15	2	33380	70674	0.214409826	0.10519458	0.513811675	151146	3.497359684	2	3
40510	0	0	2438	65561	0.134126333	0.154249738	0.408709339	172210	0.49903833	0	0
40511	4	0	33165	46252	0.209136137	0.221540887	0.283999825	89567	1.572151939	1	0
40513	4	1	10663	89505	0.222639032	0.036988874	0.639069499	214165	2.028733591	1	1
40514	3	0	14058	65811	0.237871674	0.039089395	0.590893948	141422	1.617171534	1	0
40515	1	0	35947	54181	0.215650819	0.059538525	0.554182118	147280	1.962321495	1	0
40516	0	0	2864	66908	0.202164804	0.182092555	0.38028169	93759	0.233247588	0	0
40517	14	4	34412	33392	0.201790073	0.099950025	0.403964684	95614	2.856194228	2	4
40601	14	3	49292	48784	0.192242149	0.205927791	0.279996567	102110	3.135447114	2	3
40604	0	0	220	36502	0.109090909	0.296089385	0.201117318	0	-0.82391066	0	0
40701	10	2	28916	28639	0.2171808	0.342221311	0.159470824	71605	1.652426581	1	4
40729	0	0	5605	30843	0.217662801	0.49774476	0.078535421	53462	-0.62578481	0	0
40734	0	0	3579	28882	0.215982118	0.457309454	0.095793419	47988	-0.74151814	0	0
40737	0	0	1619	39706	0.223594812	0.367100372	0.100371747	33713	-0.78398134	0	0
40740	0	0	2942	38718	0.23521414	0.383133784	0.106715252	28234	-0.69205105	0	0
40741	12	1	21208	34504	0.201244813	0.364086897	0.143720299	73623	1.672081952	1	3
40743	0	0	362	47066	0.223756906	0.338842975	0.198347107	74923	-0.69556755	0	0
40744	0	0	18961	36432	0.220874426	0.310883281	0.170504732	33968	0.265178081	0	0
40759	0	0	3481	18453	0.222637173	0.437609075	0.12609075	18522	-0.86587169	0	0
40763	0	0	467	29279	0.197002141	0.529411765	0.06501548	52680	-1.17852561	0	0
40769	4	0	19880	22967	0.2	0.431710914	0.159218289	16903	0.470722924	0	0
40771	0	0	673	16817	0.200594354	0.512035011	0.070021882	8779	-1.33034124	0	0
40801	0	0	806	19535	0.196029777	0.560846561	0.15696649	3941	-1.24137169	0	0
40806	0	0	3458	30165	0.209369578	0.321398484	0.203454086	37864	-0.50669031	0	0
40807	0	0	45	28876	0.2	0.28125	0.25	10900	-0.98423713	0	0
40808	0	0	120	23912	0.216666667	0.432098765	0.074074074	6167	-1.35506327	0	0
40810	0	0	1492	23912	0.205093834	0.424063116	0.105522682	34844	-0.96567958	0	0
40813	0	0	645	41040	0.195348837	0.397777778	0.122222222	16532	-0.92842607	0	0
40815	0	0	1550	25424	0.225806452	0.459615385	0.073076923	31351	-1.04701025	0	0
40816	0	0	230	19486	0.173913043	0.472727273	0.072727273	2444	-1.35319158	0	0
40818	0	0	411	35962	0.218978102	0.38869258	0.098939929	2959	-1.09850585	0	0
40819	0	0	850	32113	0.198823529	0.475043029	0.072289157	20344	-1.09601969	0	0
40820	0	0	363	17413	0.228650138	0.53526971	0.049792531	14995	-1.45478135	0	0
40823	2	0	4575	24704	0.205245902	0.378506146	0.165143397	41079	-0.33559861	0	0
40824	0	0	365	20254	0.205479452	0.421686747	0.088353414	13707	-1.252662	0	0
40826	0	0	899	24057	0.202447164	0.586151369	0.085346216	27724	-1.24076746	0	0
40827	0	0	424	28161	0.195754717	0.465986395	0.12244898	16396	-1.15641185	0	0
40828	0	0	4386	23980	0.201550388	0.495480415	0.087378641	34314	-0.78394406	0	0

40829	0	0	214	30276	0.219626168	0.414965986	0.108843537	0	-1.22612629	0	0
40830	0	0	141	30276	0.212765957	0.4375	0.114583333	7668	-1.24281588	0	0
40831	5	1	4654	29505	0.201117318	0.388871811	0.163541346	55566	0.067561896	0	1
40840	0	0	529	28161	0.20415879	0.430939227	0.135359116	7892	-1.11441024	0	0
40843	0	0	627	21491	0.202551834	0.508235294	0.011764706	9435	-1.35775208	0	0
40844	0	0	73	19486	0.178082192	0.461538462	0.076923077	4503	-1.40203246	0	0
40845	0	0	479	41040	0.185803758	0.396449704	0.142011834	20231	-0.92000363	0	0
40847	0	0	60	43615	0.216666667	0.575	0.075	2518	-1.35703403	0	0
40849	0	0	40	27509	0.225	0.538461538	0.115384615	0	-1.45036962	0	0
40854	0	0	935	23673	0.188235294	0.272321429	0.242559524	24725	-0.7532288	0	0
40855	0	0	801	24080	0.207240949	0.294010889	0.20508167	26688	-0.8510764	0	0
40856	0	0	1149	21557	0.174934726	0.419082126	0.138888889	17519	-0.99599852	0	0
40858	0	0	590	28161	0.203389831	0.435960591	0.15270936	4497	-1.09488996	0	0
40862	0	0	544	34875	0.204044118	0.407407407	0.116402116	18972	-1.02359449	0	0
40863	0	0	437	24161	0.162471396	0.451713396	0.080996885	21544	-1.16931203	0	0
40865	0	0	143	30165	0.195804196	0.346534653	0.128712871	17886	-1.0959365	0	0
40868	0	0	744	28161	0.188172043	0.460076046	0.1121673	20265	-1.07931617	0	0
40870	0	0	257	40995	0.186770428	0.309782609	0.184782609	35803	-0.81180888	0	0
40873	0	0	2369	32113	0.193752638	0.431927711	0.104819277	35336	-0.78941859	0	0
40874	0	0	760	14746	0.192105263	0.50094162	0.094161959	17460	-1.26617477	0	0
40902	0	0	1216	19277	0.216282895	0.599759615	0.050480769	17700	-1.32624445	0	0
40903	0	0	581	17110	0.213425129	0.417721519	0.060759494	16685	-1.26074769	0	0
40906	6	0	11428	17110	0.218673434	0.433952461	0.11897649	54637	0.326527271	0	0
40913	0	0	292	13484	0.20890411	0.509803922	0.088235294	5773	-1.44045775	0	0
40914	0	0	449	28444	0.204899777	0.594771242	0.088235294	7845	-1.3407149	0	0
40915	0	0	1465	31359	0.227303754	0.434196891	0.176165803	37223	-0.85652637	0	0
40921	0	0	382	17466	0.230366492	0.586614173	0.094488189	8929	-1.46692034	0	0
40923	0	0	425	28124	0.230588235	0.476702509	0.046594982	41923	-1.23120293	0	0
40927	0	0	239	21491	0.20083682	0.512345679	0.012345679	19088	-1.42968661	0	0
40935	0	0	3161	15992	0.233470421	0.574879227	0.065700483	29133	-1.10182343	0	0
40939	0	0	520	15571	0.2	0.582633053	0.070028011	10188	-1.43648961	0	0
40940	0	0	583	14244	0.202401372	0.580645161	0.064516129	11287	-1.43963108	0	0
40941	0	0	263	14642	0.174904943	0.560209424	0.073298429	0	-1.47729433	0	0
40943	0	0	343	28681	0.239067055	0.518018018	0.108108108	10915	-1.30120157	0	0
40946	0	0	572	35933	0.230769231	0.532085561	0.053475936	0	-1.27272695	0	0
40949	0	0	1110	16623	0.218018018	0.445187166	0.058823529	9904	-1.22562099	0	
40953	0	0	585	35933	0.230769231	0.533854167	0.028645833	12778	-1.26936922	0	0
40958	0	0	254	28247	0.208661417	0.572254335	0.069364162	10807	-1.3895028	0	0
40962	2	0	19541	27159	0.192825342	0.491099324	0.101213398	51720	0.245208391	0	0
40964	0	0	129	30276	0.224806202	0.431818182	0.125	0	-1.26271218	0	0
40965	6	1	13422	21425	0.199150648	0.39344086	0.139032258	62803	0.554345644	0	1
40972	0	0	1017	24440	0.175024582	0.574555404	0.054719562	22906	-1.21985851	0	0
40977	2	0	9808	26828	0.182911909	0.454235845	0.117071094	47994	-0.09636003	0	0
40979	0	0	47	14746	0.191489362	0.545454545	0.060606061	4476	-1.57555029	0	0
40982	0	0	166	13304	0.253012048	0.611650485	0.048543689	13343	-1.65894935	0	0
40983	0	0	608	10381	0.208881579	0.485365854	0.068292683	4696	-1.39510077	0	0
40988	0	0	649	28247	0.204930663	0.533632287	0.094170404	21088	-1.20469031	0	0
40995	0	0	85	16590	0.176470588	0.5	0.083333333	0	-1.46016101	0	0
40997	0	0	392	15992	0.219387755	0.625954198	0.061068702	11144	-1.53412275	0	0
41001	4	0	14714	61102	0.225023787	0.165995248	0.227455841	126486	1.174402239	1	1
41002	0	0	2646	31469	0.225623583	0.289830508	0.153107345	65601	-0.54554928	0	0
41003	0	0	3173	35937	0.231957138	0.287428023	0.077255278	40999	-0.60234988	0	0
41004	0	0	4234	35185	0.225555031	0.309388336	0.142958748	57865	-0.42820842	0	0
41005	5	2	26184	68123	0.257294531	0.115802982	0.296871181	130373	1.833986805	1	1
41006	0	0	4110	64877	0.208272506	0.277878022	0.155900397	64532	-0.09304839	0	0
41007	0	0	5175	73095	0.230917874	0.18130396	0.201250372	93265	0.238544598	0	0
41008	5	1	6960	33549	0.222988506	0.300535906	0.114469453	87298	0.330847133	0	1
41010	0	0	3132	43575	0.22541507	0.350868726	0.089285714	43666	-0.57272675	0	0
41011	11	0	26229	41078	0.192725609	0.235757543	0.273594512	96734	2.107867712	2	0
41014	2	0	6854	42478	0.212722498	0.284313725	0.159846547	58906	0.087355575	0	0
41015	3	0	21227	52482	0.211852829	0.232778933	0.200900901	109152	1.106258345	1	0

41016	0	0	5477	44039	0.213985759	0.217626386	0.196809949	68202	-0.07797636	0	0
41017	15	2	41118	65133	0.219368646	0.088854276	0.42760894	151089	3.558898915	2	2
41018	8	0	25674	50869	0.234439511	0.186476868	0.222360617	95900	1.791495936	1	0
41030	1	0	6020	56403	0.254983389	0.223432519	0.172688629	78172	0.119433588	0	0
41031	5	1	15809	41229	0.21399203	0.256147541	0.157507452	88318	0.91158557	1	0
41033	0	0	2276	49368	0.210456942	0.272370999	0.112344873	34846	-0.5026355	0	0
41034	0	0	1108	40096	0.210288809	0.238410596	0.145695364	65106	-0.58584173	0	0
41035	3	0	11040	40581	0.255797101	0.283739018	0.13927697	85198	0.38410696	0	0
41039	0	0	2584	32980	0.207043344	0.329358319	0.141396934	59812	-0.58067656	0	0
41040	1	0	7212	37082	0.214087632	0.287963538	0.121193288	75049	-0.05942137	0	0
41041	2	0	6605	29781	0.216199849	0.321468799	0.156341518	63914	-0.07280063	0	0
41042	24	2	48996	49593	0.234345661	0.138168129	0.293634497	118852	4.300981397	2	3
41043	0	0	1916	58218	0.204592902	0.288855193	0.160727824	51650	-0.38001922	0	0
41044	0	0	1004	32624	0.21812749	0.30191458	0.184094256	29917	-0.77800796	0	0
41045	0	0	1957	41623	0.234542667	0.274371069	0.170597484	59125	-0.51624706	0	0
41046	0	0	1195	46944	0.246861925	0.322368421	0.081578947	44929	-0.75277203	0	0
41048	3	0	11369	106040	0.281291231	0.1336074	0.356922625	153288	1.490489906	1	0
41049	0	0	2430	29708	0.221399177	0.381011097	0.085696671	54888	-0.76340723	0	0
41051	5	0	25749	62058	0.265447202	0.162393701	0.255055118	113531	1.628040384	1	1
41052	0	0	89	44053	0.224719101	0.275862069	0.155172414	20234	-0.92780923	0	0
41055	0	0	1874	50982	0.220917823	0.277689873	0.210443038	68340	-0.36502065	0	0
41056	7	1	14368	37727	0.214922049	0.270799347	0.214620718	75087	1.058761353	1	1
41059	0	0	3801	60053	0.211786372	0.161340608	0.233047545	56113	0.013671785	0	0
41062	0	0	5	40096	0.2	0	0	0	-0.95059071	0	0
41063	0	0	3446	52428	0.211549623	0.235955056	0.171564391	87050	-0.15051474	0	0
41064	0	0	1936	36152	0.183884298	0.383009359	0.125989921	59913	-0.66015591	0	0
41071	6	0	21247	40301	0.1950393	0.266815386	0.193605083	65090	1.204302412	1	0
41073	3	0	5885	46400	0.191503823	0.210016937	0.165255263	71644	0.305088119	0	0
41074	1	0	5358	36278	0.223590892	0.300338409	0.10998308	61498	-0.24658668	0	0
41075	7	2	15562	59002	0.210127233	0.1145686	0.413295615	124734	1.782471548	1	2
41076	4	1	17729	44131	0.167240115	0.150685981	0.334866253	114925	1.310447451	1	0
41080	0	0	2834	77614	0.23288638	0.211611503	0.236028215	98649	0.115998557	0	0
41083	0	0	1678	32142	0.23659118	0.307762557	0.109589041	29328	-0.80188496	0	0
41085	0	0	200	36356	0.235	0.246153846	0.146153846	49757	-0.87574689	0	0
41086	0	0	3528	42214	0.236678005	0.295731707	0.128484321	37858	-0.48202894	0	0
41091	4	0	18812	82738	0.260578354	0.087866471	0.415549598	145408	1.802387311	1	1
41092	0	0	3263	61357	0.233527429	0.216697936	0.140243902	92525	-0.11470611	0	0
41093	0	0	2983	28570	0.2256118	0.355745108	0.117410938	45447	-0.68968841	0	0
41094	3	0	15166	50495	0.252802321	0.180049413	0.24387482	91601	0.879855502	1	0
41095	0	0	2861	37835	0.236630549	0.322580645	0.089247312	71756	-0.56884794	0	0
41097	1	0	7270	40048	0.22957359	0.279365742	0.136031713	69453	-0.0362514	0	0
41098	0	0	1841	42214	0.207495926	0.319013524	0.105011933	50518	-0.62656701	0	0
41099	0	0	380	41583	0.076315789	0.087227414	0.510903427	0	-0.15627775	0	0
41101	17	0	17996	37642	0.199044232	0.237706218	0.228426396	63073	2.329262968	2	2
41102	3	0	20923	39719	0.17956316	0.197435727	0.199893709	68061	0.95902354	1	0
41121	0	0	1937	31354	0.199793495	0.402973978	0.093680297	50259	-0.79799594	0	0
41124	0	0	1111	31017	0.214221422	0.587217044	0.058588549	25106	-1.19624139	0	0
41129	1	0	11053	47181	0.19949335	0.216914138	0.205939316	59575	0.368603853	0	0
41132	0	0	908	31194	0.231277533	0.364249578	0.094435076	5492	-1.03514331	0	0
41135	0	0	102	30858	0.205882353	0.444444444	0.055555556	921	-1.33306249	0	0
41139	4	0	7907	38431	0.184393575	0.227440633	0.164995602	13531	0.319311195	0	0
41141	0	0	2604	27717	0.220430108	0.42799306	0.083863505	55126	-0.81029487	0	0
41142	0	0	22	29372	0.181818182	0.266666667	0	24676	-1.20339349	0	0
41143	4	0	14382	31194	0.202058128	0.318072047	0.15818072	61066	0.548358834	0	0
41144	2	0	11186	44268	0.205167173	0.299831846	0.155219247	57877	0.312147352	0	0
41146	0	0	157	31194	0.23566879	0.37254902	0.078431373	14351	-1.21579455	0	0
41149	1	0	656	21687	0.217987805	0.502283105	0.123287671	26817	-1.09230433	0	0
41159	0	0	512	31017	0.2265625	0.615384615	0.056213018	19358	-1.35750071	0	0
41164	0	0	13603	29196	0.204146144	0.417515924	0.104883227	52534	-0.11577288	0	0
41166	0	0	973	45293	0.214799589	0.305471125	0.085106383	22879	-0.79314088	0	0
41168	0	0	2924	39094	0.214774282	0.248481781	0.146255061	40131	-0.46531834	0	0

41169	4	0	5543	37851	0.191953816	0.179801071	0.223667432	59097	0.379911603	0	0
41171	0	0	4427	31052	0.191777728	0.477674269	0.106007067	44501	-0.64564924	0	0
41174	0	0	1134	27780	0.188712522	0.290322581	0.115384615	36995	-0.81444423	0	0
41175	0	0	5540	32311	0.203249097	0.260744986	0.118520448	56191	-0.32013035	0	0
41179	2	0	8574	19358	0.209353861	0.45899134	0.080489047	40655	-0.31729525	0	0
41180	0	0	1354	21411	0.198670606	0.443266172	0.072110286	18178	-1.09137867	0	0
41183	0	0	1163	42251	0.185726569	0.193470375	0.165659008	54490	-0.48913442	0	0
41189	0	0	2291	28624	0.203841117	0.321026283	0.17146433	62463	-0.59764549	0	0
41201	0	0	284	22905	0.207746479	0.49	0.065	10624	-1.35233826	0	0
41203	0	0	560	19331	0.210714286	0.468586387	0.096858639	26617	-1.229502	0	0
41204	0	0	554	26598	0.216606498	0.372972973	0.091891892	34907	-1.06635084	0	0
41214	0	0	938	26921	0.207889126	0.438679245	0.160377358	22556	-1.00260894	0	0
41216	0	0	1678	31818	0.199046484	0.351054852	0.148523207	41194	-0.7334244	0	0
41219	0	0	1818	37059	0.215071507	0.402607987	0.076609617	37837	-0.82511292	0	0
41222	0	0	3334	28634	0.196760648	0.370593293	0.154342218	32675	-0.62888444	0	0
41224	0	0	6352	26024	0.16168136	0.441106031	0.154147616	48427	-0.43095388	0	0
41226	0	0	224	37059	0.227678571	0.391891892	0.074324324	15107	-1.15216975	0	0
41230	4	0	11564	23182	0.203562781	0.383045329	0.113448535	57670	0.235851212	0	0
41231	0	0	609	19331	0.213464696	0.415458937	0.132850242	46845	-1.08571387	0	0
41232	0	0	642	26876	0.202492212	0.436651584	0.101809955	12290	-1.13308182	0	0
41234	0	0	579	37021	0.189982729	0.331719128	0.150121065	2228	-0.9092909	0	0
41238	0	0	1100	34458	0.206363636	0.389986825	0.108036891	12879	-0.94085996	0	0
41240	7	1	6365	26598	0.186017282	0.335375191	0.181141982	59266	0.469861211	0	1
41250	0	0	1861	12817	0.194519076	0.511574074	0.090277778	31296	-1.11809358	0	0
41254	0	0	625	36584	0.2016	0.373303167	0.110859729	46579	-0.89866782	0	0
41255	0	0	1118	27092	0.191413238	0.544757033	0.076726343	34184	-1.12167955	0	0
41256	0	0	2609	37356	0.206975853	0.346904629	0.16787507	49541	-0.5512324	0	0
41257	0	0	568	22440	0.213028169	0.424479167	0.091145833	15837	-1.19103382	0	0
41260	0	0	380	23880	0.205263158	0.354961832	0.13740458	35934	-1.04721098	0	0
41262	0	0	1497	38767	0.225784903	0.424897119	0.116255144	29116	-0.85937958	0	0
41263	0	0	725	23880	0.204137931	0.357852883	0.125248509	35037	-0.99197742	0	0
41264	0	0	552	26876	0.197463768	0.44386423	0.09921671	26577	-1.12201254	0	0
41265	0	0	2049	37021	0.192776964	0.324982603	0.142658316	54323	-0.58894976	0	0
41267	0	0	1077	13954	0.252553389	0.48766328	0.09724238	55178	-1.19006331	0	0
41268	0	0	137	53493	0.189781022	0.28125	0.21875	22896	-0.71111375	0	0
41271	0	0	221	23880	0.212669683	0.362416107	0.120805369	28128	-1.14388465	0	0
41274	0	0	520	23223	0.203846154	0.368421053	0.11634349	41373	-1.04275987	0	0
41301	0	0	6540	15330	0.213914373	0.453789071	0.130425006	1242	-0.72244004	0	0
41311	0	0	7098	20647	0.165539589	0.479754366	0.093072347	51293	-0.5364618	0	0
41314	0	0	5580	19585	0.196774194	0.494038362	0.122861586	33157	-0.6982023	0	0
41317	0	0	338	16162	0.204142012	0.424369748	0.109243697	19904	-1.26018867	0	0
41332	0	0	1260	31196	0.207142857	0.428074246	0.099767981	26546	-0.96278304	0	0
41339	3	0	10261	19105	0.209043953	0.410083087	0.150260527	51829	0.023462506	0	0
41348	0	0	1519	16621	0.204081633	0.5078125	0.086914063	25379	-1.149354	0	0
41352	0	0	781	31196	0.202304738	0.424074074	0.112962963	0	-1.07310027	0	0
41360	0	0	510	27084	0.225490196	0.526470588	0.097058824	8499	-1.28595014	0	0
41365	0	0	495	21606	0.236363636	0.476780186	0.126934985	26933	-1.22756824	0	0
41366	0	0	12	20942	0.25	0.25	0	0	-1.41056999	0	0
41367	0	0	272	37977	0.183823529	0.481865285	0.098445596	11353	-1.1478568	0	0
41385	0	0	394	15038	0.187817259	0.374100719	0.104316547	19074	-1.19532493	0	0
41390	0	0	46	18973	0.217391304	0.516129032	0.096774194	1882	-1.50716481	0	0
41397	0	0	54	20647	0.185185185	0.526315789	0.052631579	9735	-1.48884304	0	0
41408	0	0	253	56710	0.213438735	0.403508772	0.093567251	3076	-0.96962039	0	0
41421	0	0	272	34214	0.216911765	0.519337017	0.082872928	4897	-1.28818537	0	0
41425	0	0	905	29813	0.207734807	0.401284109	0.104333868	36003	-0.97546945	0	0
41464	0	0	456	12932	0.203947368	0.524271845	0.055016181	4032	-1.45235392	0	0
41465	2	0	12142	20571	0.209520672	0.494067797	0.089830508	57452	-0.12162553	0	0
41472	3	0	10609	28086	0.172589311	0.443907536	0.136084628	55267	0.122173406	0	0
41501	15	2	22971	36927	0.187540812	0.332435741	0.191799266	82712	2.199388732	2	2
41503	2	0	462	32503	0.158008658	0.17765043	0.252148997	68631	-0.3049097	0	0
41512	0	0	1054	37247	0.180265655	0.448871182	0.078353254	36918	-0.92643942	0	0

37

41513	0	0	693	17646	0.174603175	0.386	0.094	29427	-1.09289581	0	0
41514	0	0	3698	44925	0.20822066	0.292848582	0.141030763	47410	-0.37255563	0	0
41517	0	0	118	12776	0.220338983	0.328767123	0.136986301	0	-1.30489097	0	0
41519	0	0	938	45227	0.203624733	0.373643411	0.147286822	13887	-0.8056361	0	0
41522	0	0	5208	27646	0.183371736	0.4117806	0.081599568	50319	-0.56066231	0	0
41524	0	0	415	28710	0.197590361	0.520833333	0.048611111	17165	-1.28741253	0	0
41526	0	0	14	27976	0.214285714	0.1	0	0	-1.15775794	0	0
41527	0	0	697	47008	0.197991392	0.257142857	0.257142857	74812	-0.45163745	0	0
41528	0	0	860	29100	0.197674419	0.473244147	0.088628763	22834	-1.09463928	0	0
41531	0	0	1242	46616	0.183574879	0.304740406	0.17268623	33962	-0.58445987	0	0
41534	0	0	121	32779	0.20661157	0.407407407	0.049382716	8054	-1.26239506	0	0
41535	0	0	327	30446	0.198776758	0.318584071	0.150442478	30577	-0.95767849	0	0
41537	0	0	5488	27527	0.191144315	0.382122321	0.12990068	52633	-0.46573831	0	0
41538	0	0	18	27527	0.166666667	0.083333333	0	6814	-1.06935997	0	0
41539	0	0	1877	36853	0.207245605	0.387897595	0.076027929	45117	-0.78074167	0	0
41540	0	0	372	42760	0.180107527	0.455223881	0.093283582	19882	-1.03397004	0	0
41543	0	0	638	30446	0.217868339	0.41588785	0.086448598	18242	-1.10284482	0	0
41544	0	0	891	23777	0.203142536	0.413680782	0.169381107	52901	-0.92871559	0	0
41547	0	0	429	29100	0.2004662	0.530405405	0.091216216	11580	-1.2599427	0	0
41548	0	0	662	42760	0.181268882	0.460084034	0.098739496	41969	-0.92094762	0	0
41553	0	0	2398	24439	0.188490409	0.516053707	0.071220082	45626	-0.9432139	0	0
41554	0	0	1226	32515	0.19004894	0.418685121	0.080738178	49268	-0.89498272	0	0
41555	0	0	820	19130	0.208536585	0.436944938	0.085257549	0	-1.22365494	0	0
41557	0	0	2070	28666	0.196135266	0.330130405	0.113246397	54891	-0.70059057	0	0
41558	0	0	865	34161	0.184971098	0.44045677	0.11908646	43314	-0.92192026	0	0
41559	0	0	366	17646	0.196721311	0.3828125	0.08984375	20960	-1.20930506	0	0
41560	0	0	592	41422	0.190878378	0.386634845	0.133651551	6863	-0.92913527	0	0
41562	0	0	2939	27633	0.206532834	0.410079051	0.101778656	37228	-0.76829513	0	0
41563	0	0	406	24086	0.179802956	0.462328767	0.116438356	19447	-1.17425519	0	0
41564	0	0	1061	45227	0.201696513	0.370218579	0.133879781	40198	-0.73523187	0	0
41566	0	0	757	28710	0.199471598	0.525714286	0.04952381	20845	-1.2157364	0	0
41567	0	0	424	30446	0.212264151	0.386759582	0.097560976	37125	-1.05770318	0	0
41568	0	0	990	24439	0.201010101	0.592375367	0.098240469	21247	-1.22830654	0	0
41571	0	0	594	31584	0.171717172	0.329519451	0.107551487	27003	-0.92037566	0	0
41572	0	0	3645	30342	0.193415638	0.449648712	0.113583138	52664	-0.65932933	0	0
41601	0	0	652	24869	0.188650307	0.37605042	0.138655462	16785	-1.02366629	0	0
41602	0	0	576	43072	0.199652778	0.317307692	0.180288462	30164	-0.75637097	0	0
41603	0	0	1329	41170	0.217456734	0.409745293	0.086378738	16982	-0.89549341	0	0
41604	0	0	531	19303	0.207156309	0.574585635	0.077348066	14639	-1.38332142	0	0
41605	1	0	495	48267	0.181818182	0.411267606	0.247887324	59471	-0.5473424	0	0
41606	0	0	1068	19113	0.192883895	0.44966443	0.096644295	13880	-1.13442378	0	0
41607	0	0	336	29632	0.193452381	0.29535865	0.202531646	21638	-0.8977997	0	0
41612	0	0	38	19113	0.184210526	0.333333333	0.037037037	2709	-1.35836072	0	0
41615	0	0	771	41170	0.208819715	0.409774436	0.086466165	47812	-0.89856109	0	0
41616	0	0	848	23352	0.211084906	0.291808874	0.14334471	19207	-0.93614825	0	0
41619	0	0	723	21788	0.222683264	0.424489796	0.132653061	32726	-1.09467898	0	0
41621	0	0	149	19902	0.194630872	0.439252336	0.14953271	4992	-1.28067695	0	0
41622	0	0	145	28947	0.2	0.2	0.16	1682	-0.97181267	0	0
41630	0	0	813	24174	0.188191882	0.428082192	0.102739726	25160	-1.07072206	0	0
41631	1	0	1175	22392	0.219574468	0.544642857	0.088010204	29855	-1.07640217	0	0
41632	0	0	716	18163	0.231843575	0.544871795	0.079059829	13754	-1.3576605	0	0
41635	1	0	2693	16216	0.202005199	0.436227224	0.124330118	37766	-0.77729074	0	0
41636	0	0	831	29212	0.223826715	0.42300885	0.134513274	32012	-1.00935594	0	0
41640	0	0	1993	21764	0.204214752	0.446594982	0.097491039	24619	-0.97962763	0	0
41642	0	0	873	32614	0.205040092	0.407590759	0.158415842	78216	-0.80296965	0	0
41643	0	0	56	28638	0.178571429	0.4	0.15	0	-1.20272146	0	0
41645	1	0	1120	42883	0.207142857	0.252604167	0.158854167	29012	-0.52866784	0	0
41647	0	0	1746	26251	0.227376861	0.398642918	0.134860051	30773	-0.89316707	0	0
41649	1	0	2764	24869	0.201157742	0.343987823	0.141552511	42809	-0.57279286	0	0
41650	0	0	403	29212	0.183622829	0.515789474	0.09122807	10318	-1.23411295	0	0
41653	8	1	11210	31257	0.184834969	0.345663739	0.188543857	70459	0.898690606	1	1

41655	0	0	1280	28475	0.221875	0.468677494	0.100928074	37443	-1.0146425	0	0
41659	0	0	436	48267	0.185779817	0.392282958	0.221864952	18208	-0.77938926	0	0
41660	0	0	696	19303	0.209770115	0.554621849	0.039915966	25788	-1.34960311	0	0
41663	0	0	274	41170	0.215328467	0.451086957	0.130434783	20094	-1.07097858	0	0
41666	0	0	909	29182	0.185918592	0.391502276	0.115326252	31939	-0.94285509	0	0
41667	0	0	906	17010	0.21192053	0.431340872	0.071082391	24451	-1.18599073	0	0
41669	0	0	553	14725	0.160940325	0.42014742	0.066339066	16873	-1.22217902	0	0
41701	8	2	17560	25206	0.193849658	0.388676793	0.150109658	51301	0.964704806	1	3
41712	0	0	256	23508	0.18359375	0.404371585	0.158469945	17430	-1.12674653	0	0
41713	0	0	14	22776	0.214285714	0.111111111	0	0	-1.21483543	0	0
41714	0	0	572	28429	0.187062937	0.509852217	0.091133005	10610	-1.20156236	0	0
41719	0	0	1724	25206	0.186194896	0.382926829	0.156910569	14879	-0.85424515	0	0
41721	0	0	871	36900	0.206659013	0.390202703	0.113175676	29688	-0.91082853	0	0
41722	0	0	908	30560	0.183920705	0.391371341	0.115562404	23053	-0.94847013	0	0
41723	0	0	1494	32345	0.224899598	0.447046843	0.074338086	25332	-0.99156592	0	0
41725	0	0	94	25579	0.191489362	0.4	0.107692308	0	-1.26951382	0	0
41727	0	0	587	46983	0.204429302	0.428217822	0.126237624	11269	-0.93479906	0	0
41729	0	0	42	18918	0.166666667	0.413793103	0.137931034	11157	-1.28585238	0	0
41731	0	0	923	18602	0.189599133	0.493883792	0.091743119	27756	-1.17377063	0	0
41735	0	0	220	31423	0.190909091	0.583333333	0.057692308	11632	-1.37270974	0	0
41739	0	0	175	30560	0.188571429	0.4	0.104	0	-1.19155812	0	0
41740	0	0	905	25579	0.193370166	0.3808	0.1216	13239	-1.0100824	0	0
41745	0	0	152	36900	0.203947368	0.398058252	0.106796117	8239	-1.13795477	0	0
41746	0	0	791	32134	0.209860936	0.565055762	0.065055762	22777	-1.20843349	0	0
41749	1	0	3709	28429	0.183337827	0.457703927	0.120090634	43596	-0.57160032	0	0
41751	0	0	61	37483	0.196721311	0.441860465	0.093023256	4104	-1.23509023	0	0
41754	0	0	338	41360	0.207100592	0.471615721	0.126637555	8534	-1.09258392	0	0
41759	0	0	244	27756	0.18852459	0.341176471	0.117647059	16556	-1.08325379	0	0
41760	0	0	5	24648	0.2	0	0	0	-1.08807791	0	0
41762	0	0	98	20369	0.214285714	0.575757576	0.060606061	4150	-1.5528786	0	0
41763	0	0	732	18602	0.191256831	0.576923077	0.069230769	17818	-1.33588163	0	0
41764	0	0	631	24680	0.18066561	0.490066225	0.068432671	11146	-1.21995707	0	0
41766	0	0	142	28429	0.183098592	0.534653465	0.059405941	8819	-1.37576931	0	0
41772	0	0	528	26004	0.193181818	0.394594595	0.12972973	4792	-1.09890113	0	0
41773	0	0	1403	24648	0.207412687	0.510010537	0.084299262	24083	-1.10445866	0	0
41774	0	0	2988	37483	0.179718876	0.422077922	0.109925788	49473	-0.61958254	0	0
41775	0	0	158	36819	0.189873418	0.419642857	0.107142857	3328	-1.15178196	0	0
41776	0	0	1176	24680	0.194727891	0.456626506	0.104819277	31779	-1.02814836	0	0
41777	0	0	1285	17789	0.186770428	0.514626219	0.044420368	17149	-1.22064403	0	0
41804	0	0	617	60925	0.175040519	0.319910515	0.181208054	27338	-0.56860582	0	0
41810	0	0	389	27218	0.192802057	0.407942238	0.083032491	18946	-1.1502394	0	0
41812	0	0	264	29880	0.212121212	0.585635359	0.049723757	11940	-1.40770422	0	0
41815	0	0	792	45381	0.227272727	0.330769231	0.117307692	33112	-0.80260505	0	0
41817	0	0	207	33128	0.198067633	0.405594406	0.181818182	13651	-1.05822352	0	0
41819	0	0	365	25346	0.178082192	0.528957529	0.046332046	12078	-1.32887652	0	0
41821	0	0	624	13034	0.193910256	0.403628118	0.099773243	15974	-1.2113507	0	0
41822	1	0	2614	27975	0.192425402	0.356126915	0.207877462	52604	-0.46628123	0	0
41824	0	0	868	28459	0.207373272	0.478333333	0.091666667	37263	-1.0788298	0	0
41825	0	0	608	30443	0.189144737	0.507009346	0.079439252	26464	-1.1523504	0	0
41826	0	0	779	15830	0.163029525	0.384353741	0.164965986	25871	-1.00978187	0	0
41828	0	0	833	32013	0.18967587	0.49137931	0.09137931	15321	-1.09577563	0	0
41831	0	0	708	35119	0.187853107	0.427165354	0.155511811	18339	-0.94892462	0	0
41832	0	0	454	19309	0.165198238	0.350724638	0.179710145	10305	-1.03243228	0	0
41833	0	0	362	25346	0.190607735	0.490196078	0.054901961	4893	-1.31384616	0	0
41834	0	0	741	27552	0.190283401	0.413793103	0.166666667	35512	-0.94858451	0	0
41835	0	0	692	23561	0.179190751	0.418699187	0.06504065	34062	-1.09832423	0	0
41836	0	0	688	27552	0.17877907	0.406570842	0.135523614	10679	-1.02861108	0	0
41837	0	0	1622	38808	0.18865598	0.359861592	0.169550173	38274	-0.65820972	0	0
41838	0	0	802	30726	0.198254364	0.468468468	0.104504505	11398	-1.09503311	0	0
41839	0	0	1182	28638	0.175972927	0.426589595	0.132947977	21474	-0.9341533	0	0
41840	0	0	532	30443	0.195488722	0.44772118	0.09919571	13833	-1.12519903	0	0

39

41843	0	0	967	17454	0.19131334	0.439821694	0.106983655	43433	-1.07393825	0	0
41844	0	0	1346	36698	0.140416048	0.434262948	0.217131474	38158	-0.67628036	0	0
41845	0	0	348	15830	0.181034483	0.48046875	0.09375	9804	-1.32806225	0	0
41847	0	0	633	27756	0.186413902	0.319004525	0.108597285	22607	-0.962761	0	0
41848	0	0	86	13034	0.197674419	0.409836066	0.06557377	0	-1.44771901	0	0
41849	0	0	185	30726	0.2	0.4453125	0.1328125	5497	-1.19997411	0	0
41855	0	0	858	26461	0.206293706	0.478632479	0.112820513	15538	-1.12431333	0	0
41858	1	0	7996	29880	0.199974987	0.409447415	0.136541889	44371	-0.23543858	0	0
41859	0	0	327	24249	0.19266055	0.433628319	0.092920354	8288	-1.23112977	0	0
41861	0	0	99	28638	0.171717172	0.452054795	0.136986301	4546	-1.2250653	0	0
41862	0	0	916	24249	0.189956332	0.45984252	0.092913386	16704	-1.11611768	0	0
42001	12	2	26782	48237	0.196139198	0.139796351	0.338672041	91707	2.445799045	2	2
42003	9	3	31305	33950	0.199361124	0.240129479	0.203565241	72259	1.826255114	1	3
42020	0	0	2204	31216	0.197368421	0.31809275	0.150881777	26906	-0.67714911	0	0
42021	0	0	1585	31708	0.195583596	0.313848921	0.121402878	30853	-0.7585471	0	0
42022	0	0	8	49398	0.125	0	0	8056	-0.75585097	0	0
42023	0	0	2525	31708	0.191683168	0.261331841	0.16340235	40143	-0.5349572	0	0
42024	0	0	1418	41306	0.197461213	0.21664995	0.161484453	39859	-0.53755568	0	0
42025	5	1	19836	37756	0.185924582	0.244671842	0.197529993	78417	1.091571267	1	1
42027	0	0	2387	40665	0.204021785	0.175015088	0.153289077	43811	-0.40180216	0	0
42028	0	0	375	40344	0.178666667	0.319852941	0.110294118	16866	-0.90997391	0	0
42029	0	0	6250	44049	0.18736	0.214766607	0.146319569	66780	-0.05310328	0	0
42031	1	0	3236	31566	0.191285538	0.381676075	0.105514546	45826	-0.52865982	0	0
42032	0	0	28	28485	0.214285714	0.315789474	0	17362	-1.30798481	0	0
42035	0	0	903	38629	0.214839424	0.208469055	0.146579805	31375	-0.68308846	0	0
42036	0	0	1240	45785	0.17983871	0.346501129	0.118510158	31013	-0.69388525	0	0
42037	0	0	22	38532	0.181818182	0.25	0.0625	2686	-1.08846424	0	0
42038	2	0	4846	38532	0.135988444	0.305080284	0.142932351	86825	0.04004387	0	0
42039	0	0	1437	40570	0.219206681	0.285266458	0.140020899	26046	-0.68882337	0	0
42040	0	0	1050	43386	0.198095238	0.227830832	0.182810368	20314	-0.60334137	0	0
42041	0	0	4567	30824	0.186336764	0.260816201	0.135624425	39848	-0.39905077	0	0
42044	0	0	3343	38652	0.149566258	0.168486739	0.218408736	94119	-0.07658443	0	0
42045	0	0	1951	33805	0.157355202	0.243371856	0.15635622	61575	-0.47592688	0	0
42047	0	0	220	43754	0.168181818	0.308641975	0.135802469	8830	-0.89118253	0	0
42048	0	0	1938	36876	0.176986584	0.270729979	0.155917789	40425	-0.548681	0	0
42049	0	0	1441	34681	0.174184594	0.215854823	0.222540592	44050	-0.48972659	0	0
42050	0	0	3215	31786	0.177293935	0.368647717	0.115848407	41067	-0.60869909	0	0
42051	0	0	2881	39217	0.20617841	0.254288597	0.160948537	28896	-0.47358564	0	0
42053	0	0	5612	45544	0.204205274	0.179216091	0.193398659	59262	-0.03130373	0	0
42054	0	0	1171	48267	0.191289496	0.178614824	0.188335358	33318	-0.45062716	0	0
42055	0	0	2550	41504	0.141960784	0.288519637	0.190835851	76521	-0.30023377	0	0
42056	0	0	2114	29284	0.19205298	0.289806795	0.152564957	42340	-0.63269736	0	0
42058	1	0	2372	42628	0.203625632	0.182486222	0.150642988	66985	-0.23269918	0	0
42060	0	0	20	34936	0.2	0	0.076923077	5788	-0.87811898	0	0
42061	0	0	13	56702	0.230769231	0	0	0	-0.82550907	0	0
42064	1	0	8529	32074	0.197913003	0.332887701	0.121657754	48341	-0.1177184	0	0
42066	8	0	23828	37911	0.217517207	0.277332837	0.188737816	64380	1.441875365	1	2
42069	0	0	1060	56702	0.214150943	0.167822469	0.19001387	30928	-0.41157035	0	0
42071	8	3	29689	31110	0.151066051	0.186248481	0.350492733	87320	1.94949939	1	2
42076	0	0	1392	25529	0.146551724	0.262962963	0.134259259	50355	-0.67220132	0	0
42078	0	0	1881	33830	0.166400851	0.335483871	0.109677419	36994	-0.69069888	0	0
42079	0	0	1484	46333	0.208221024	0.267591675	0.134786918	32142	-0.59321356	0	0
42081	0	0	2394	39550	0.182957393	0.277291302	0.150029189	45638	-0.48512768	0	0
42082	0	0	1580	36883	0.191139241	0.241286863	0.207327971	55549	-0.48739505	0	0
42083	0	0	689	42993	0.191582003	0.291060291	0.143451143	15656	-0.77367507	0	0
42084	0	0	4	36685	0.25	0	0	0	-1.04169249	0	0
42085	0	0	692	31549	0.190751445	0.283975659	0.123732252	26531	-0.86349231	0	0
42086	0	0	3074	52556	0.20396877	0.216	0.227294118	77859	-0.11337705	0	0
42087	0	0	2561	35369	0.193674346	0.205540166	0.134072022	50650	-0.4546736	0	0
42088	0	0	2708	33434	0.213072378	0.241454151	0.124796527	40329	-0.54940409	0	0
42101	14	2	56855	34898	0.200175886	0.25282092	0.248164163	82007	3.035315237	2	1

40

42102	0	0	8	46469	0.125	0	0	0	-0.80044787	0	0
42103	8	2	18637	71210	0.204646671	0.113226609	0.426484302	135203	2.160684174	2	2
42104	13	0	30318	51316	0.199683356	0.111722307	0.418531866	124332	2.868858734	2	0
42120	0	0	2505	37899	0.216766467	0.436678614	0.065710872	40426	-0.78681492	0	0
42122	0	0	5226	63888	0.227707616	0.129624235	0.329740752	74009	0.309069765	0	0
42123	0	0	664	39261	0.204819277	0.306521739	0.110869565	55399	-0.78597395	0	0
42124	0	0	12	18157	0.25	0.375	0	0	-1.55682816	0	0
42127	3	0	6645	28865	0.214296464	0.330388693	0.145980565	52968	-0.01194127	0	0
42129	0	0	7180	33330	0.209888579	0.424568528	0.09177665	48379	-0.42521408	0	0
42130	0	0	202	55775	0.222772277	0.288888889	0.133333333	2750	-0.85148831	0	0
42133	0	0	1768	32139	0.208710407	0.350287121	0.113207547	26400	-0.80294932	0	0
42134	4	2	17115	38766	0.209874379	0.278572047	0.159778182	87593	0.813291498	0	2
42140	0	0	1324	31713	0.20694864	0.274033149	0.163535912	46322	-0.68499355	0	0
42141	12	2	30429	36589	0.213743468	0.284519633	0.147498438	77264	2.044813216	1	3
42151	0	0	628	15478	0.194267516	0.465909091	0.134090909	16333	-1.21171984	0	0
42153	0	0	380	23621	0.205263158	0.374045802	0.129770992	14093	-1.12657489	0	0
42154	0	0	719	34764	0.203059805	0.406060606	0.123232323	11041	-0.99915503	0	0
42156	0	0	177	39261	0.209039548	0.290322581	0.129032258	2259	-0.99839297	0	0
42157	0	0	414	18964	0.236714976	0.347985348	0.095238095	22271	-1.18984911	0	0
42159	0	0	1490	42188	0.206040268	0.224289912	0.212536729	30191	-0.50488321	0	0
42160	0	0	2313	34497	0.230004323	0.35971223	0.116415958	31925	-0.74127993	0	0
42163	0	0	31	34497	0.193548387	0.380952381	0.047619048	0	-1.27916718	0	0
42164	4	0	16212	37818	0.215889465	0.337162655	0.133570387	71379	0.641293705	0	1
42166	0	0	2525	36159	0.215049505	0.360093077	0.062827225	36152	-0.73689643	0	0
42167	5	0	7571	28946	0.202879408	0.444928085	0.118092354	58060	0.144472962	0	1
42170	0	0	1272	46060	0.202044025	0.211912944	0.27720504	25381	-0.42307473	0	0
42171	0	0	5885	46956	0.218181818	0.272083017	0.141736269	51422	-0.18195111	0	0
42202	0	0	1767	26309	0.204301075	0.325163399	0.126633987	53273	-0.74901184	0	0
42204	0	0	1306	33292	0.246554364	0.320868516	0.150784077	15352	-0.85022389	0	0
42206	0	0	5364	46544	0.228187919	0.285552408	0.161189802	61762	-0.19917169	0	0
42207	0	0	1249	31967	0.172938351	0.430283224	0.075163399	49768	-0.89285613	0	0
42210	1	0	4294	23326	0.193758733	0.376859504	0.070743802	47902	-0.54944578	0	0
42211	2	0	13605	41737	0.193164278	0.276254527	0.177858251	90988	0.532605809	0	0
42214	0	0	573	37135	0.218150087	0.484293194	0.107329843	7780	-1.12432701	0	0
42215	0	0	1302	46257	0.213517665	0.293785311	0.129943503	16144	-0.69120957	0	0
42217	2	0	4511	33397	0.218133452	0.340871845	0.132415601	49244	-0.25804046	0	0
42220	0	0	6063	34327	0.232393205	0.36525445	0.104537478	54091	-0.42456087	0	0
42232	0	0	937	69493	0.240128068	0.168831169	0.225649351	29055	-0.31359727	0	0
42234	0	0	2447	33292	0.249693502	0.344315245	0.155684755	42870	-0.67899708	0	0
42236	0	0	1469	37163	0.247787611	0.232978723	0.203191489	35731	-0.60689562	0	0
42240	10	2	41538	37163	0.229380326	0.246561922	0.218513008	75269	2.206401762	2	2
42254	0	0	90	37163	0.244444444	0.275862069	0.137931034	2598	-1.07094279	0	0
42256	1	0	5394	40843	0.21449759	0.364205938	0.090983383	48199	-0.30620838	0	0
42259	0	0	1177	37060	0.142735769	0.498305085	0.082485876	44897	-0.89159134	0	0
42261	1	0	9986	33330	0.205487683	0.397406004	0.0948703	56615	-0.11473556	0	0
42262	0	0	8633	29079	0.314143403	0.1171875	0.144325658	67321	-0.10646629	0	0
42265	0	0	1509	42870	0.194831014	0.244840525	0.181988743	26692	-0.54448209	0	0
42266	0	0	2623	45338	0.264963782	0.326946848	0.182323857	43276	-0.52600837	0	0
42273	0	0	348	48177	0.172413793	0.339920949	0.09486166	35659	-0.83284223	0	0
42274	0	0	2333	48400	0.219459923	0.229936306	0.182802548	46489	-0.3715946	0	0
42275	0	0	817	22860	0.205630355	0.461400359	0.048473968	15314	-1.21600537	0	0
42276	4	1	14404	31447	0.217717301	0.313463515	0.141418294	66745	0.532550472	0	2
42280	0	0	632	40843	0.262658228	0.411167513	0.101522843	16732	-1.0463675	0	0
42285	0	0	449	33960	0.191536748	0.315457413	0.059936909	7021	-1.03715625	0	0
42286	0	0	1329	42017	0.257336343	0.316290131	0.20332937	68685	-0.59800454	0	0
42301	16	2	42589	43789	0.213764117	0.190131579	0.228427978	82674	3.047995046	2	2
42303	16	2	38347	37185	0.214593058	0.202703744	0.250693268	89883	2.914622372	2	2
42320	3	0	8793	35247	0.225747754	0.367749617	0.104439531	53072	0.06901918	0	0
42321	0	0	176	40604	0.221590909	0.355932203	0.076271186	16469	-1.08977732	0	0
42322	0	0	1	28603	0	0	0	0	-0.83101757	0	0
42323	0	0	430	30271	0.227906977	0.327464789	0.059859155	41406	-1.04956672	0	0

42324	0	0	1256	36845	0.191878981	0.377085651	0.111234705	22251	-0.84309977	0	0
42325	0	0	1680	40920	0.204166667	0.30848329	0.111396744	36240	-0.66845732	0	0
42326	0	0	622	30271	0.226688103	0.319612591	0.065375303	14542	-1.05560852	0	0
42327	0	0	4017	43789	0.206123973	0.271438953	0.150436047	56088	-0.30437433	0	0
42328	0	0	1353	37541	0.239467849	0.292710706	0.10022779	42313	-0.76333972	0	0
42330	3	1	10786	34981	0.183664009	0.346267887	0.118473637	63353	0.273258221	0	0
42332	0	0	17	23140	0.176470588	0.25	0.083333333	11293	-1.18230333	0	0
42333	0	0	1236	35247	0.220873786	0.360675513	0.066344994	15921	-0.94126329	0	0
42337	0	0	2297	26401	0.208532869	0.400253325	0.087397087	28958	-0.86753858	0	0
42338	0	0	89	41130	0.224719101	0.322033898	0.118644068	4011	-1.07562317	0	0
42339	0	0	783	36845	0.19412516	0.402504472	0.103756708	24094	-0.94652259	0	0
42343	0	0	1658	32400	0.197225573	0.341968912	0.107944732	35492	-0.77678243	0	0
42344	0	0	1280	31243	0.20703125	0.427765237	0.064334086	25028	-1.00113868	0	0
42345	1	1	10970	35151	0.189425706	0.309037529	0.147817207	64504	0.128253376	0	1
42347	4	1	6242	37541	0.218840115	0.298411946	0.151694714	53316	0.183210473	0	1
42348	0	0	4963	44403	0.224058029	0.234753295	0.122893043	62702	-0.23043283	0	0
42349	0	0	1523	30913	0.218647406	0.46131528	0.066731141	28334	-1.00859689	0	0
42350	0	0	1390	26242	0.211510791	0.300838574	0.098532495	47426	-0.82435414	0	0
42351	1	0	4220	43316	0.225592417	0.202621325	0.165781084	71394	-0.08781828	0	0
42352	0	0	1606	42427	0.212951432	0.283348666	0.150873965	50954	-0.57307274	0	0
42354	0	0	68	38930	0.220588235	0.444444444	0.066666667	10423	-1.26245724	0	0
42355	0	0	2279	46757	0.236946029	0.262978142	0.120901639	64174	-0.47067628	0	0
42356	0	0	1	48446	0	0	0	0	-0.65441487	0	0
42361	0	0	807	39319	0.215613383	0.35154827	0.127504554	10609	-0.90124668	0	0
42366	0	0	6196	57676	0.233699161	0.143892081	0.195103672	5768	-0.00785875	0	0
42367	0	0	211	20727	0.180094787	0.450980392	0.052287582	83878	-1.16930825	0	0
42368	0	0	1071	47876	0.225023343	0.286115007	0.105189341	47371	-0.67033487	0	0
42369	0	0	84	37541	0.226190476	0.303571429	0.107142857	12949	-1.08586412	0	0
42370	0	0	2	30913	0	0	0	0	-0.80644727	0	0
42371	0	0	1220	36508	0.195081967	0.366164542	0.114716107	18368	-0.8493404	0	0
42372	0	0	1653	33163	0.199637024	0.272493573	0.150814053	40122	-0.64874778	0	0
42374	0	0	166	34878	0.204819277	0.373913043	0.069565217	8337	-1.16828333	0	0
42376	0	0	5460	55319	0.219413919	0.194360799	0.193265809	64505	0.025218033	0	0
42378	0	0	3596	40624	0.238598443	0.233968804	0.149913345	53301	-0.37412844	0	0
42404	0	0	3072	42796	0.210611979	0.288689068	0.083293895	39381	-0.52349863	0	0
42406	0	0	3466	41269	0.215810733	0.235824742	0.155498282	51466	-0.35230592	0	0
42408	1	0	6302	32161	0.211202793	0.347351301	0.084572491	42518	-0.32573042	0	0
42409	0	0	2569	40354	0.170494356	0.279552716	0.084132055	50001	-0.51002108	0	0
42410	1	0	279	23509	0.229390681	0.37704918	0.049180328	26282	-1.13560473	0	0
42411	0	0	1946	32808	0.172661871	0.284002819	0.140944327	31819	-0.62788278	0	0
42413	0	0	2931	54324	0.201296486	0.193389245	0.226936359	45088	-0.16094367	0	0
42420	12	1	38084	38299	0.208171411	0.216473194	0.216855048	83216	2.422163564	2	1
42431	9	1	27918	40040	0.204455907	0.268949795	0.171597327	64693	1.699075256	1	1
42436	0	0	1174	58499	0.200170358	0.210526316	0.211750306	36045	-0.36886458	0	0
42437	4	0	8935	50365	0.193284835	0.223813355	0.155913113	60108	0.570197947	0	1
42440	0	0	83	31705	0.192771084	0.338983051	0.118644068	30040	-1.08189079	0	0
42441	0	0	1659	43844	0.198915009	0.270199826	0.145091225	33297	-0.57180415	0	0
42442	0	0	4334	31773	0.213659437	0.36868858	0.080989495	45147	-0.59135763	0	0
42445	3	0	11844	36515	0.192333671	0.269239962	0.13706979	48530	0.385877827	0	0
42450	2	0	3761	27600	0.211645839	0.298989114	0.127527216	36796	-0.35180657	0	0
42451	0	0	1499	59752	0.204136091	0.206796117	0.194174757	23063	-0.36451942	0	0
42452	0	0	2418	59050	0.207609595	0.213851762	0.204738761	52753	-0.2006807	0	0
42453	0	0	499	32370	0.184368737	0.418994413	0.047486034	14027	-1.12980732	0	0
42455	0	0	3388	36476	0.233471074	0.281557744	0.161145927	54462	-0.45348903	0	0
42456	0	0	1592	44436	0.209798995	0.220494053	0.142726441	29939	-0.54929288	0	0
42458	0	0	898	59752	0.208240535	0.220588235	0.199346405	24543	-0.4584467	0	0
42459	1	0	4300	30417	0.203488372	0.25338295	0.154262517	43616	-0.29655228	0	0
42461	0	0	1122	30047	0.215686275	0.298527443	0.089692102	47072	-0.84019615	0	0
42462	0	0	911	40045	0.215148189	0.240650407	0.128455285	37742	-0.70584713	0	0
42463	0	0	66	45886	0.196969697	0.282608696	0.043478261	3633	-1.05761716	0	0
42464	0	0	2221	42829	0.211166141	0.345191041	0.085638999	41237	-0.65230796	0	0

42501	10	2	19285	30455	0.202385274	0.336522771	0.16451565	62200	1.373346604	1	1
42503	6	1	20705	42239	0.201110843	0.279481132	0.189511654	81654	1.21768055	1	1
42516	0	0	485	31725	0.216494845	0.498480243	0.045592705	8305	-1.26862075	0	0
42518	0	0	2934	29701	0.197682345	0.331222601	0.138821237	74704	-0.5369882	0	0
42519	0	0	3175	28188	0.183307087	0.502426114	0.084252316	53338	-0.78722552	0	0
42528	0	0	1788	29508	0.211409396	0.456718879	0.115416323	20917	-0.94086697	0	0
42533	0	0	510	30455	0.231372549	0.269230769	0.153846154	33816	-0.89302751	0	0
42539	2	0	9370	25467	0.200320171	0.411809699	0.101881597	46321	-0.12957877	0	0
42541	0	0	637	20683	0.202511774	0.314479638	0.126696833	26217	-1.0114325	0	0
42544	1	0	5806	30123	0.173957975	0.346153846	0.146575985	68598	-0.20280171	0	0
42553	0	0	6392	31924	0.216051314	0.357734807	0.13213628	42851	-0.3952643	0	0
42565	0	0	840	28821	0.264285714	0.595375723	0.080924855	11869	-1.33058222	0	0
42566	0	0	635	31725	0.209448819	0.435483871	0.046082949	9827	-1.16437079	0	0
42567	0	0	6512	30506	0.2129914	0.398108534	0.081513173	46735	-0.48227868	0	0
42602	3	0	10000	25463	0.2147	0.465439791	0.11375163	52555	-0.03084154	0	0
42603	0	0	158	21347	0.208860759	0.444444444	0.074074074	11382	-1.35312485	0	0
42629	0	0	4936	24037	0.196515397	0.396926645	0.161206147	65471	-0.49102046	0	0
42631	0	0	12	25746	0.25	0.125	0	32790	-1.17092571	0	0
42633	5	1	20181	25433	0.199445023	0.428212491	0.105384063	55113	0.646000556	0	1
42634	0	0	1758	18806	0.232650739	0.509615385	0.076048951	19230	-1.1623795	0	0
42635	0	0	2956	24663	0.158322057	0.508241758	0.150641026	41623	-0.76913449	0	0
42638	0	0	335	24488	0.217910448	0.45	0.095454545	20268	-1.24200158	0	0
42642	0	0	12542	30027	0.200047839	0.376869506	0.141682841	59709	-0.05261422	0	0
42647	0	0	3434	19025	0.208211998	0.487722269	0.116426757	34935	-0.86921607	0	0
42649	0	0	3373	20597	0.221761044	0.530501582	0.078174424	28163	-0.97476412	0	0
42653	1	0	4969	25746	0.213725096	0.414341434	0.136813681	34592	-0.49857304	0	0
42701	17	3	50357	48691	0.225092837	0.17582483	0.254633624	104015	3.45390538	2	3
42712	0	0	1904	43344	0.214285714	0.367000771	0.115651503	36557	-0.68460215	0	0
42713	0	0	1404	30055	0.215099715	0.453488372	0.076109937	37617	-0.98802145	0	0
42715	0	0	312	24011	0.205128205	0.45971564	0.123222749	13259	-1.23294065	0	0
42716	0	0	1586	37235	0.21185372	0.335507922	0.107176142	37212	-0.75010943	0	0
42717	1	0	6822	27764	0.200967458	0.444863732	0.103563941	52458	-0.37310874	0	0
42718	3	1	24781	36126	0.19595658	0.313605717	0.178470581	72311	0.905213904	1	2
42721	1	0	4243	32466	0.218006128	0.435178697	0.097407148	44127	-0.53666562	0	0
42722	0	0	763	35166	0.217562254	0.397260274	0.109589041	29201	-0.96918262	0	0
42724	0	0	4159	39033	0.217840827	0.262784091	0.146661932	49272	-0.36100686	0	0
42726	0	0	4962	30069	0.207779121	0.349607672	0.095030514	56152	-0.49593806	0	0
42728	3	1	16285	29222	0.193552349	0.38785291	0.157110491	60926	0.436419547	0	1
42729	0	0	1826	28504	0.234939759	0.435414885	0.053892216	28497	-1.00157562	0	0
42731	0	0	182	17289	0.225274725	0.401639344	0.090163934	6635	-1.35138366	0	0
42732	0	0	2252	36950	0.218916519	0.310979619	0.132807364	54118	-0.59648869	0	0
42733	0	0	1376	25581	0.208575581	0.486573577	0.083780881	37444	-1.04807835	0	0
42740	0	0	2074	59920	0.228061716	0.242159008	0.207877462	54901	-0.27118558	0	0
42741	0	0	380	36618	0.197368421	0.441947566	0.08988764	17475	-1.10313448	0	0
42743	3	0	8714	37836	0.195776911	0.386922321	0.123238283	51323	0.120747776	0	0
42746	0	0	1763	35942	0.216108905	0.44783715	0.076335878	38308	-0.88572708	0	0
42748	4	0	9071	38567	0.211222577	0.263746959	0.182481752	69199	0.462082655	0	0
42749	1	0	5602	24524	0.216172795	0.389122438	0.122700998	54919	-0.41417959	0	0
42753	0	0	635	31167	0.22992126	0.464547677	0.100244499	17384	-1.14539245	0	0
42754	0	0	14826	30956	0.206259274	0.369179163	0.127170481	59714	0.034760316	0	0
42757	0	0	2842	38303	0.203377903	0.349949135	0.132756867	51158	-0.55431001	0	0
42758	0	0	20	39466	0.2	0.153846154	0	0	-1.08404693	0	0
42762	0	0	673	30045	0.224368499	0.439732143	0.131696429	12095	-1.09562814	0	0
42764	0	0	509	33989	0.21021611	0.392550143	0.074498567	10582	-1.09638947	0	0
42765	0	0	5814	27535	0.21620227	0.433787606	0.096682952	42908	-0.58256482	0	0
42776	0	0	2887	36530	0.231035677	0.33492569	0.128980892	39522	-0.6146135	0	0
42782	0	0	1091	39781	0.207149404	0.3708166	0.077643909	20331	-0.89291539	0	0
42784	0	0	2325	36919	0.232688172	0.372937294	0.120792079	33798	-0.725453	0	0
42788	0	0	299	45651	0.183946488	0.221698113	0.155660377	23896	-0.72823623	0	0

CURRICULUM VITAE

Wes Cardall, DMD

EDUCATION	2010-2012 University of Louisville, M.S. in Oral Biology and Certificate in Orthodontics 2005-2007 Arizona School of Dentistry & Oral Health (ASDOH), D.M.D. 2006-2007 University of North Carolina at Chapel Hill, Distance Learning Program, Certificate in Core Public Health Concepts 2003-2005 University of California, Los Angeles (UCLA), School of Dentistry 1997-2003 Brigham Young University (BYU), B.S. Zoology
AWARDS & HONORS	Inducted into Omicron Kappa Upsilon, the national dental honor society Graduated Summa Cum Laude from the Arizona School of Dentistry & Oral Health with 4.0 GPA UCLA Affiliates Scholarship (2005) UCLA Dean's Scholarship (2003) California Dental Association Foundation Scholarship (2004) American Academy of Dental Research (AADR) Bloc Travel Grant for poster presentation at IADR Australia (2006) Graduated Summa Cum Laude from BYU with 4.0 GPA Speaker at 2003 Convocation of BYU College of Biology & Agriculture Winner of 2004 UCLA School of Dentistry talent show
PROFESSIONAL EXPERIENCE	2008-2010: Associate at Monarch Dental in American Fork, UT (General Dentistry) • Lead dental team to set new production records in a formerly struggling corporate dental office 2007-2008: Associate at Cougar Dental in Provo, UT • Helped grow practice and increase revenues as associate dentist
RESEARCH	Masters Thesis: "Using A Statistical Model to Locate Potential Orthodontic Practice Sites in Kentucky" Published in May 2008 Journal of Dental Education (see Cardall et al, "Dental Education from the Students' Perspective: Curriculum and Climate") Poster presentation at the IADR Australia 2006 Poster presentation at the CDA Spring 2006 Scientific Session in Anaheim
PROFESSIONAL ACTIVITIES	Founder and President of Orthodontics Study Club at ASDOH Organized Give Kids a Smile! Day 2006 at ASDOH as part of the Planning Committee Founded and co-orchestrated the Dental Student Morale Survey Project at six U.S. dental schools

PERSONAL INTERESTS & HOBBIES	Spending time with wife, Lindsey, and traveling to new places Winter surfing at the Huntington Beach Pier. Skiing in Park City, UT. Basketball, tennis, wakeboarding, racquetball, swimming, and inline skating. Replicating popular songs on the piano and keyboard Studying history and making authentic Swiss Fondue—and speaking French