

Developer and Realtor Perspectives on Factors That Influence Development, Sale, and Perceived Demand for Activity-Friendly Communities

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Background: Although public support for physical activity-friendly Traditional Neighborhood Developments (TNDs) appears to be growing, information is lacking on private sector perspectives and how economic factors (eg, fuel prices) might influence the development and sale of TNDs. **Methods:** A sample of realtors from the National Association of Realtors (n = 4950) and developers from the National Association of Home Builders (n = 162) were surveyed in early 2009 to assess factors influencing homebuyers' decisions; incentives and barriers to developing TNDs; effects of depressed housing market conditions and financing on sales; trends in buying; and energy considerations (eg, green building). **Results:** Realtors believed that homebuyers continue to rank affordability, safety and school quality higher than TND amenities. Developers reported numerous barriers to TNDs, including the inability to overcome governmental/political hurdles, lack of cooperation between government agencies, and lack of market demand. Yet, realtors believed clients are increasingly influenced by gas and oil prices, and developers reported that clients are looking for energy efficient homes, reduced commute time, and walkable neighborhoods. Respondents reported consumers are more interested in living in a TND than 5 years ago. **Conclusions:** Activity-friendly TNDs appear to be increasing in demand, but developers and realtors reported significant barriers to creating these communities.

Keywords: physical activity, built environment, survey research, health, motivation, public health

There are well-established associations between elements of the built environment and physical activity.¹⁻⁶ The built environment—the physical form of communities—includes land use patterns (the location of activities across space), large- and small-scale built

and natural features (eg, buildings, landscaping), and the transportation system (facilities and services that link one location to another).⁷⁻⁹ Together, these elements shape opportunities for physical activity.

Increasingly, there has been interest among public health professionals and those connected to the real estate industry, in traditional neighborhood developments (TNDs)—sometimes called “New Urbanist,” “Smart Growth,” “walkable,” or “activity-friendly”—as an alternative to conventional suburban developments.^{10,11} Suburban designs are characterized by a strict separation of land uses, with businesses located outside of residential neighborhoods. In contrast, TNDs emphasize a combination of different housing types and commercial uses densely located around a town center. TNDs offer the potential for reducing automobile use and improving capacity for walking and cycling for transportation, but they typically require changes in zoning laws and street design standards. Evidence has shown that there is an unmet demand for TNDs¹² while public support for a more sustainable approach to development and active transportation appears to be growing.^{10,13-15}

Land use decisions in the United States are made primarily by local governments, which have influential impacts on activity-friendly community environments.^{8,9} In some places, local governments have encouraged or

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required TNDs through changes in their land development code or through incentives for developers, who may or may not choose to respond. In other instances, private sector developers have led the movement toward TND, negotiating with local governments to approve innovative projects. In both cases, participation of the private developer is critical to making TND happen. Realtors may also play a role in the success of these projects by the marketing strategies they use, and they may have a unique perspective on the outlook for the potential market for TNDs.

Societal forces may have a significant impact on TNDs. In the past decade, the housing market has gone through an enormous boom and bust. As people worked to achieve home ownership, housing prices skyrocketed, many subprime mortgages were dispersed and the pace of new home construction increased across the country. In 2008, the housing market crashed as foreclosure rates grew. A simultaneous spike in oil and gasoline prices led many suburban dwellers to reevaluate their long commutes, and housing markets in the most distant suburbs were hit the hardest. Though developers face significant hurdles in the current economic climate, these trends may open up a window of opportunity for TNDs. This is because TNDs provide a more transportation efficient and economical choice for households than auto-oriented suburbs.

The engagement of many sectors is needed to make land use decisions that support active living in this volatile housing market. Most often these sectors have included urban planning, transportation, parks and recreation, and increasingly public health.¹² Often missing in this multisectoral approach is the role of the private sector. Two professional groups with significant impact on TNDs are realtors and developers, yet limited data are available on the perspectives of these important actors and their ability to adapt to a changing land development context.

Therefore, the aim of the current study was to survey developer and realtor perspectives on these central questions: (1) what are the key factors affecting interest in building and living in TNDs, and (2) what is the outlook for TNDs, given the housing crisis?

Methods

Realtors belonging to the National Association of Realtors (NAR) and developers in the National Association of Home Builders (NAHB) were surveyed to assess their perspectives on factors influencing homebuyers' decisions (realtors only) and on incentives and barriers to developing TNDs (developers only). They were also asked about how current economic factors have impacted the sale and demand for TNDs (both realtors and developers). Only real estate licensees who are members of the National Association of Realtors are properly called realtors.

Two separate survey instruments were developed, one for realtors and one for developers. Both survey instruments were partly based on previous work¹⁶⁻¹⁹ and

were approved by all members of the research team before data collection. The research protocol was approved by the Washington University in St. Louis Human Research Protection Office committee. The NAR and the NAHB both agreed to distribute the surveys for the study team to maintain member confidentiality and trust.

The surveys defined a TND as having most of the following elements:²⁰

- a mix of uses that provide opportunities to live, work, and play within reasonable walking and biking distances
- an integrated mix of housing types and price ranges to create a socioeconomic mixture as well as land use mix
- an interconnected street network with direct routes between origins and destinations (rather than a reliance on cul-de-sacs with circuitous circulation)
- a town center, formal public spaces and squares (rather than informal or "leftover" open spaces)
- pedestrian-oriented design with garages to the rear of house lots and parking lots behind buildings that are set close to the street and frame sidewalk spaces.

Realtor Survey

Participants and Data Collection. Among the 1.3 million members of the NAR, a random sample of 40,000 real estate agents and brokers were selected by NAR from the private National Realtors Database System (NRDS) to participate in an online survey in January 2009. An e-mail notifying members of the survey was sent by NAR several days before survey distribution, and 2 follow-up emails were sent to nonresponders 10 and 17 days postdistribution.

Measures. The online realtor survey consisted of 20 questions, some with multiple parts. Key topic areas (with number of items and response choices) addressed in the realtor survey included: factors influencing homebuyers' decisions (18 items, where 1 = not at all influential, to 5 = very influential); opinion about when housing market would begin improving (1 item, with response choices of middle of 2009, end of 2009, middle of 2010, end of 2010, housing market stable); effects of housing downturn and financing on sales (2 items, where 1 = dramatically reduced sales to 5 = dramatically increased sales); trends in buying and energy (3 items where 1 = strongly disagree to 5 = strongly agree); and the roles of local and state government in encouraging TND for growth management (1 item, where 1 = not at all active, to 5 = very active).

Developer Survey

Participants and Data Collection. The NAHB sent an e-mail notification to all 5,000 members of their Internet Survey Panel in March 2009. This private panel consisted of members who were builders, developers, and remodelers from every region, division, and state in the U.S. Only members who performed some residential

development were eligible. Due to budget constraints and the billing requirements of the NAHB, the study team was required to prepay for a specified number of respondents. The researchers at NAHB noted that it would be unlikely to obtain more than 150 developers in a large sample of home builders. Therefore, the study team paid for 150 developer responses. Within 1 day of survey distribution, 326 panel members responded (6.5% response rate), and of these 162 were eligible. NAHB subsequently closed the survey since the number of responses exceeded the 150 limit.

Measures. The online developer survey consisted of 20 questions, some with multiple parts. The content of the developer and realtor surveys differed from one another in the following 3 ways: (1) the developer survey did not include factors influencing homebuyers' decisions; (2) the developer survey assessed factors influencing development decisions (44 items, where 1 = not at all influential, to 5 = very influential); and (3) the developer survey assessed changes in clients' interest in TNDs possibly resulting from recent events within the real estate market (2 items, where 1 = strongly disagree, to 5 = strongly agree).

Data Analysis

The perceived impact of various factors on the sale and development of TNDs was the main focus of these analyses. Analyses were performed using SPSS version 15 for Windows (SPSS, Inc., Chicago, IL). Percentages were compared across subgroups using the chi-square test. Realtor respondents were aggregated into regions in such a way that the regions were as similar in number of respondents as possible while remaining contiguous.

Results

Demographics

Of the 40,000 NAR members solicited, including agents and brokers, 4950 responded (response rate = 12.4%). The majority of respondents (79%) described their primary occupation as Realtor Sales Agent or Broker Associate (Table 1). The mean and median number of years in real estate among respondents was 12 and 8 years, respectively. There was a fairly equal distribution of respondents by area, with the exception of the South and Alaska, Hawaii, and Territories regions. Half of all respondents noted their company primarily sold homes in the area surrounding the company office. Nearly all respondents (96%) sold detached single-family residences with townhouses, row houses, apartments, or condos of 2 to 3 stories being the next most frequently sold type of housing (53%).

Ninety percent of the 162 developers that responded described their primary occupation as builder (Table 1). The mean and median number of years developers worked in the field was 24 and 25, respectively. The Southeastern

Seaboard and Midwest regions shared the largest percentage (21%) of developers based on company location, and similar to realtor respondents, roughly half of all developers (54%) noted that their company primarily developed homes in the area surrounding their company office. The majority of respondents (89%) developed detached single-family residences, more than a quarter (28%) developed townhouses, row houses, apartments, or condos of 2 to 3 stories, and 25% developed a mix of these housing types. Only 17% of respondents noted that they primarily developed homes as part of TND. Most developed new homes in either outlying (67%) or in existing, partially developed suburban areas (70%). About one-third of respondents primarily developed new homes on vacant land in central city or inner suburbs (35%) and 38% specialized in infill development.

Factors Influencing Homebuyers' Decisions (Realtors only)

When asked to rate the factors affecting home purchases in their area, realtors reported affordability/value, safety from crime, and quality of schools as the most influential factors (Table 2). The least influential factors were ease of walking, "green" living and closeness to public transportation. Physical activity related features (eg, access to recreational facilities, ease of walking, and closeness to open green space) appeared to be less important than auto-oriented related features (eg, access to highway, reduce commute time and save on gas), though having an area safe for biking and walking ranked near the middle of the list of important factors. Some factors varied considerably across regions. For example, closeness to public transportation was the least important factor in the Southeastern Seaboard (12%) yet received a score of 29% in the more urbanized Northeast.

Factors Influencing Development Decisions (Developers only)

Developers were asked to identify the extent to which specific factors *encourage* development of a TND (Table 3). Respondents reported the most encouraging factors were shorter time for permitting, reduced impact fees, and higher allowable density (lot yields). Other important factors included reduced infrastructure costs (streets, curbs, gutters, and sidewalks) and reduced storm water management costs. Those factors reported as least influential included: car sharing programs available, requirement to conform with LEED-ND standards and regulations allowing grid-streets.

Respondents were asked to identify the extent to which specific factors *prevented or discouraged* development of a TND. The most frequently cited barriers were inability to overcome governmental/political hurdles, inability of government agencies to work together and perceived lack of market demand. Among the factors that prevented or discouraged development of a TND, the following were rated to have the least impact: Gas/fuel prices

Table 1 Realtor and Developer Characteristics

Characteristic	Realtor	Developer
	% or Mean (SD)	% or Mean (SD)
N	4950	162
Primary business occupation		
Builder		90.1
Land developer		5.6
Other developer type		4.3
Realtor	79.3	
Broker	16.3	
Other realtor type	4.3	
Years working in field	11.9 (10.2)	23.8 (10.8)
Region where company is located		
West Coast and Nevada	16.9	8.6
Southeastern seaboard	16.3	21.0
Midwest	18.1	21.0
The West (including Texas)	18.5	14.8
Northeast	16.1	16.0
The South	11.8	17.3
Alaska, Hawaii, and Territories*	1.3	1.2
Area where company primarily sells/develops		
Only in the area surrounding the company office	50.0	54.3
Only in this state	33.7	34.6
Multiple states	16.3	11.1
Main type of housing company sells/develops*		
Detached single-family residences	96.0	88.9
Townhouses, row houses, apartments, or condos of 2–3 stories	53.0	27.8
Mix of single-family residences, townhouses, row houses, apt, condos	N/A	25.3
Apartments or condos of 4–12 stories	22.5	4.9
Apartments or condos of more than 12 stories	12.7	0.6
Other	13.6	1.9
Real estate agents in firm		
1–10	29.0	
11–100	40.9	
>100	28.1	
Type of development agency/company primarily develops*		
New homes in outlying areas		66.7
New homes in existing, partially developed suburban areas		70.4
New homes on vacant land in central city or inner suburbs		34.6
Existing homes and neighborhoods (infill)		37.7
Homes as part of TND		16.7

Abbreviations: N/A, not available.

* Percentages do not equal 100 because the survey question allowed for more than 1 answer.

Table 2 Realtor Perspectives of the Factors Influencing Neighborhood Choice by Region^a

Factor	West	The West & Texas ^e			The South ^g	Alaska, Hawaii, & Territories ^h	All
	Coast & Nevada ^b	Southeastern Seaboard ^c	Midwest ^d	Northeast ^f			
N	835	809	895	836	584	64	4949
Affordability/value*	92.3	93.1	95.1	90.6	93.1	84.4	93.0
Safety from crime*	88.2	87.7	88.5	84.9	91.0	79.7	87.6
Quality of schools*	83.2	80.1	90.1	88.0	87.21	68.8	85.6
Closeness to job or school*	72.0	73.0	79.1	68.8	77.9	59.4	73.1
Reduce commute time*	57.0	51.9	55.3	53.9	53.4	62.5	54.6
Sense of community*	53.7	51.9	54.9	53.5	50.2	48.4	53.0
Closeness to nearby shops and services*	46.8	60.8	47.1	46.1	55.9	43.8	50.1
Access to freeways*	44.1	43.9	47.9	45.3	42.5	27.0	45.0
Save on gas*	44.1	45.8	48.0	41.2	46.4	57.8	44.0
Safe for biking and walking*	46.9	43.1	43.4	39.2	37.7	28.1	41.2
Closeness to healthcare facilities*	31.4	44.1	31.5	29.0	40.3	40.6	33.9
Closeness to recreational facilities	28.8	34.0	32.2	28.2	27.2	31.3	30.1
Closeness to town center, formal public spaces, or squares*	28.5	32.4	25.6	23.1	30.9	31.3	27.8
Closeness to cultural and entertainment venues*	24.7	31.3	24.1	22.5	27.7	25.0	25.8
Closeness of the home to open Greenspace*	23.6	19.0	20.0	23.2	17.4	31.3	21.2
Ease of walking*	27.0	22.7	22.0	15.6	19.6	21.9	21.2
Closeness to public transportation*	22.7	11.8	24.0	12.1	18.5	25.0	19.8
“Green” living*	23.2	18.6	15.7	17.1	14.2	26.6	18.6

^aRegional differences = $P < .05$. A chi square test was used to assess regional differences.

^bPercent responding agree or strongly agree. Respondents were provided with several statements regarding homebuyers and asked to rate their level of agreement using a 5-point scale, where 1 = “strongly disagree” and 5 = “strongly agree.” On this scale, 3 = “not sure.”

^cCA, WA, OR, NV.

^dFL, GA, NC, SC.

^eIL, IN, IA, MI, MN, MO, OH, WI.

^fAZ, CO, ID, KS, MT, NE, NM, ND, OK, SD, TX, UT, WY.

^gCT, ME, MA, NH, NJ, NY, PA, RI, VT.

^hAL, AR, DE, DC, KY, LA, MD, MS, TN, VA, WV.

ⁱAK, GU, HI, PR, VI, other.

Table 3 Developer Perspectives on the Factors Influencing Development Decisions (n = 162)

Factors	Strength of encouragement (percent)*
Incentives and benefits to developing a TND	
Flexible development regulations	
Fast track permitting processes for more sustainable development	61.7
Meet other specified goals for land development (e.g., aesthetics, open space, parks, or buffers)	53.7
Density bonuses	51.2
Subject to form-based codes	38.3
Incentive for below market rate units	37.7
Requirement to conform with LEED-ND standards	25.9
Regulations allowing grid-streets	23.5
Fiscal incentives	
Availability of tax incentives	69.1
The government and their lenders absorb most of the risk should a real estate venture fail	50.6
Reduced parking requirements	43.2
Ability to build some units without on-site parking	38.3
Car sharing programs available in area of development	21.6
Potential for increased marketability	
Availability of location-efficient mortgages	54.9
Potential rent premiums for superior location/access	54.9
Significant amounts of new real estate investment underway in area or near site.	46.6
Environmental benefits	
Adjacent to transit station	38.9
Ability to market benefits related to walking, health, or reduced car use	50.0
Potential cost savings	
Reduced impact fees and increased lot yields	75.9
Potentially reduced infrastructure costs (streets, curbs, gutters, sidewalks)	72.2
Reduced storm water management costs	71.6
Reduced clearing and grading costs	66.0
Preserved existing vegetation	45.1
Factors	Strength of discouragement (percent)*
Restrictive development regulations	
Zoning/land use policies	
Affordable housing requirements	42.0
Automobile-oriented land-use policies	35.2
Subdivision policies	
Regulations requiring cul-de-sacs, large lots, large setbacks, wide streets, and separation of uses	59.3
Lack of support or interest	
Lack of market demand	71.0

(continued)

Table 3 (continued)

Factors	Strength of discouragement (percent)*
Inability of government agencies to work together	63.0
Inability to overcome governmental/political hurdles	62.3
Resistance to density	55.6
Lender policies do not recognize or value mixed-use	52.5
Lack of political support	51.9
NIMBY (not in my backyard)	47.5
Lack of lender familiarity with TNDs	47.5
Potential costs	
Financing for integrated, mixed-use development (commercial and residential)	51.2
Cost of sidewalks and intersection treatments	35.2
Inadequate transit services	34.6
Minimum parking requirements	29.6
Gas/fuel prices for construction activities	22.2
Lack of experience with TND in local development community	39.5
Lack of experience with TND within my company	29.0

*Percent checking 4 or 5 on a 1–5 scale, where 1= encourages or discourages “not at all” and 5= encourages or discourages “to a great extent.”

for construction activities, lack of experience with TND within company, and minimum parking requirements.

Respondents were asked to rate the extent 3 specific factors either *discourage* OR *encourage* development of a TND (data not shown). Both Brownfield issues (abandoned or underused properties where redevelopment is complicated by actual or perceived environmental contamination) and public sector participation were slightly more likely to discourage development of a TND (36% and 32% reporting strongly discourages or discourages, respectively) than encourage such development (19% and 28% reporting strongly encourages or encourages, respectively), and zoning standards appeared to be marginally encouraging (35% reporting strongly encourages or encourages vs. 28% reporting strongly discourages or discourages), though none appeared to be strong influences.

Effects of the Current Housing Market Conditions and Financing on Sales

Realtors were then asked about recent economic influences and their subsequent effects on sales of TNDs. Realtors appeared more optimistic about recovery of the housing market than developers. More than 90% of both realtors and developers indicated that the current market had reduced sales or dramatically reduced sales. The majority of realtors indicated that a reduction in available financing had contributed to reduced sales.

Realtor respondents in the West Coast/Nevada (44%) and Southeastern Seaboard regions (including Florida) (50%) were most likely to report dramatically reduced sales.

Realtor and developer respondents were asked to explain how the market had affected TNDs in their own areas. The 4432 (90%) realtors who responded to this open-ended question, in general, thought that TNDs have been as adversely impacted by the market conditions as all other aspects of real estate, despite their increased popularity. New developments of TNDs had slowed or halted, leaving the areas partially built. Among the 133 (82%) developers who responded, most noted the lack of capital and financing, reduced buyer interest, as well as the overall slowdown in the market.

Trends in Buying and Energy

Nearly half of realtors and developers surveyed believed clients were more interested in living in a TND now as compared with 5 years ago, though a large percentage in both groups indicated general uncertainty about the statement rather than agreement. Realtors thought more clients were influenced by rising gas and oil prices in where they looked to buy a home, while developers deemed that clients were increasingly looking for homes with “green” amenities, such as sealed windows, and solar and wind power to save on heating, cooling and electricity costs. Developers believed reducing commute time and

having the ability to walk to more places were the greatest factors in increasing clients' interest in living in a TND. Nearly half of developers reported that the poor market and high gas prices had affected TNDs and conventional suburban developments about the same, while a third of respondents were not sure.

Policy and the Role of Government

Respondents in both surveys were asked how active they would like state and local government to be in encouraging TNDs in local communities as part of growth management (Table 4). Developers responded more

Table 4 Perspectives on the Recent Market and Economic Influences on Development and Sales of Traditional Neighborhood Homes

	Realtors	Developers
Effects of housing downturn		
How soon you expect the housing market to begin improving		
% middle of 2009	33.4	11.7
% end of 2009	23.5	28.4
% middle of 2010	19.6	26.5
% end of 2010	11.1	27.2
% housing market is stable in my area	4.5	2.5
% not sure	8.0	3.7
How poor market affected your company within the past year		
% reduced or dramatically reduced sales/development	91.0	94.4
% no impact	4.7	3.7
% increased or dramatically increased sales/development	4.3	.12
Poor market and high gas prices have affected TNDs		
% more than conventional suburban developments	N/A	13.0
% about the same as conventional suburban developments	N/A	45.7
% less than conventional suburban developments	N/A	11.1
% not sure	N/A	30.2
Trends in buying and energy		
Clients are influenced by rising gas and oil prices in where they look to buy a home		
% agree or strongly agree	75.3	61.1
% not sure	11.7	16.7
% disagree or strongly disagree	12.9	22.3
Clients are more interested in living in a TND compared with 5 years ago		
% agree or strongly agree	45.4	46.9
% not sure	33.2	42.0
% disagree or strongly disagree	21.4	11.1
Clients are increasingly looking for homes with 'green' amenities		
% agree or strongly agree	39.8	72.8
% not sure	23.8	11.7
% disagree or strongly disagree	36.3	15.5
Clients are more interested in living in a TND to reduce commute time		
% agree or strongly agree	N/A	67.9
% not sure	N/A	13.6
% disagree or strongly disagree	N/A	7.4

(continued)

Table 4 (continued)

	Realtors	Developers
Clients are more interested in living in a TND because of the ability to walk to more places		
% agree or strongly agree	N/A	63.6
% not sure	N/A	16.7
% disagree or strongly disagree	N/A	8.7
Clients are more interested in living in a TND because they are getting older and do not want to drive as much		
% agree or strongly agree	N/A	55.6
% not sure	N/A	25.9
% disagree or strongly disagree	N/A	7.4
Clients are more interested in living in a TND because of proximity to public transportation		
% agree or strongly agree	N/A	54.9
% not sure	N/A	19.1
% disagree or strongly disagree	N/A	14.8
Clients are more interested in living in a TND to save on gas		
% agree or strongly agree	N/A	53.7
% not sure	N/A	25.3
% disagree or strongly disagree	N/A	9.9
Policy and role of government		
Public policy and regulations prohibit or impede construction of TND		
% infrequently or somewhat infrequently	N/A	32.7
% frequently or somewhat frequently	N/A	50.6
% not sure	N/A	16.7
How has the availability of financing affected your company's sales within the past year		
% reduced or dramatically reduced sales/development	80.3	N/A
% no impact	13.3	N/A
% increased or dramatically increased sales/development	1.7	N/A
How active state government should be in encouraging TNDs in local communities as part of growth management		
% somewhat active or very active	37.8	51.2
% not sure	28.3	27.2
% not very or not at all active	33.9	21.6
How active local government should be in encouraging TNDs in local communities as part of growth management		
% somewhat active or very active	52.8	71.0
% not sure	23.8	16.0
% not very or not at all active	23.4	13.0

favorably than realtors to having state and local government involved, though both groups would prefer to have their local government more engaged in the process than the state government.

Discussion

Despite the state of economic decline at the time of the surveys, there continues to be interest in the benefits associated with TNDs (eg, safe for biking and walking,

closeness to shops and services, closeness to town center, and sense of community). Realtors and developers perceived that the dominant market continues to be for an auto-oriented environment, but there was a sense that the market is shifting. About half the developers in the survey reported that clients are more interested in living in a TND now as compared with 5 years ago. Rising energy prices, congestion, aging baby boomers, and increased awareness of health benefits of walkable environments could be creating a renewed interest in urban living. Realtors

noted that more clients are influenced by rising gas and oil prices, and developers reported that clients are increasingly looking for more energy efficient homes, reduced commute time and more walkable neighborhoods.

These patterns have been noted in past and recent consumer preference surveys, indicating a growing interest in TNDs over the past decade. Nearly 1.4 million people currently live in TND communities, and, between 1997 and 2004, the number of new urbanist communities increased an average of 27% per year.^{10,11} A recent report of 2 national surveys documented that support for development of TNDs in the participants' own community increased from 44% in 2003 to 59% in 2005.²¹ Other studies have found that a greater percentage of Americans would prefer to live in a "smart growth" community as compared with a sprawl community, and commute time to work was a significant factor in choosing a home.¹⁰

Increased interest in TNDs does not necessarily translate into sales. In 2008, national construction of new housing plummeted to its lowest level since 1991, and sales of many TNDs were in a precipitous decline.²² Nearly half of developers in our survey believed the current economic downturn impacted sales and development of TNDs about the same as conventional suburban developments. Yet, other data contradict developer perceptions, such as a greater decline in prices in distant suburbs than in more dense, centralized regions, and that walkable, transit-oriented developments are suffering least.²² The 2008 economic downturn is only one of many factors playing a role in affecting the sale and development of TNDs. For example, our survey indicated that realtors believed prospective buyers continue to rank affordability, safety and school quality at the top of the list of factors guiding new home purchases. Several consumer surveys conducted by the NAHB and the NAR for Smart Growth America in 2000, 2002, and 2004 found similar results.¹³⁻¹⁵ The majority of the developers in our survey perceived a lack of market demand as one of the most influential barriers to developing a TND. Perhaps survey respondents were not aware of evidence of increasing support for TNDs,²⁰ the interest of these groups in marketing auto-oriented developments may both color their perceptions and drive consumer demand.

In considering how to enhance the perceived value of TNDs to both real estate professionals and home buyers, social marketing approaches could be useful.²³ Traditionally, social marketing has been used to encourage behavior change among consumers; however, it may also be an effective way to reach the distribution channels influencing the built environment (eg, developers, real estate agents, and policy makers).²⁴ Benefits of TNDs could be promoted to developers and real estate agents so that they, in turn, could use these benefits in their own marketing, ultimately increasing demand and decreasing barriers to developing and selling TNDs. Social marketing campaigns targeted at realtors and developers should endorse TND characteristics known to be related to both homebuyers' decisions and physical activity, such as having a safe area for biking and walking, living close to shops, services, and the town center, and having a sense of community. Economic data are particularly relevant to developers and real estate agents. Homes in areas with

above average walkability can command premiums of \$4000 to \$34,000 compared with those with average or lower walkability.²⁵

As consumers, realtors and developers understand and support the benefits of TND, they may increase demand, putting pressure on policy makers to decrease the barriers to developing TNDs.²⁴ Local officials have the authority to change restrictive regulations that often thwart TND.⁹ The combined political pressure from consumers, developers, and realtors is likely too hard for local officials to resist. However, the social marketing that could lead to these changes must have leadership, which could come from advocates, public health practitioners, policy makers, or from a coalition of such groups.

Planning and development of communities is multifaceted. Land use decisions are typically made at the local level but are often impacted by a complex combination of government regulation, transportation investments, development focused incentives and policies, and volatile market forces. Therefore, land use decisions that increase the supply of homes in settings that support active living require the engagement of seemingly disparate sectors.⁹ This level of multisectoral engagement will require institutional change and should involve all levels of the ecological model to address individuals, social environments, physical environments, and policies.^{26,27} Routine and informed interactions among health, environmental, land use, and transportation officials, as well as across public and private sectors is likely to be a key component in increasing the supply of activity-friendly communities.

Increased collaboration between public health and real estate sectors could have substantial effects. The private building sector represents 93% of total U.S. building stock,²⁸ and nearly 1.2 million realtors sold 7.5 million homes in 2006,²⁹ highlighting the tremendous impact developers and realtors have on the built environment. Advancing policy changes that support TNDs could result from collaborative partnerships that unite people and organizations around a common purpose and engage both experts and grassroots organizers.³⁰ Creating partnerships between the public health community and influential people in the real estate industry can help the private sector to appreciate the health consequences of current practices and encourage them to shift planning, building, and marketing practices to emphasize pedestrian-centered rather than automobile-centered communities. For example, the Environmental Protection Agency and the Centers for Disease Control and Prevention are embarking on a project that will add measures of walkability to online realty listings. This will allow buyers to consider neighborhood walkability when choosing a home and is a promising approach for increasing links between public health and the private sector.³¹

The private sector cannot achieve these changes without government support, in part because zoning laws and development regulations require or favor automobile-centered development. In addition, it is important to understand how lending policies influence both residential location choices made by consumers and development decisions made by developers. Developers indicated that 2 of the biggest factors discouraging the development of a TND were an inability to overcome

governmental/political hurdles, and an inability of government agencies to work together. Even though fewer than 17% of developers built mainly TNDs, a large proportion of respondents indicated they would like their local government to be “very active” in encouraging TND in local communities. This seems to present an opportunity for developers, public health professionals, and planners to work together for policy changes.

The most substantial limitation of the current study was the potential for selection bias, due primarily to low response rates. Realtors and developers who participated had access to the internet and chose to complete the survey, possibly resulting in an over-sampling of participants who had the time to participate in a survey (due to lower sales, etc). Realtors and developers associated with the NAR and NAHB may be more successful and well-established in their field than those who are not. Developers and realtors who are most, or least, supportive of TNDs may have been more likely to respond than members who remain neutral on the subject. The resulting sample may over represent individuals who have strong opinions. Seventeen percent of developer respondents primarily developed TNDs. At present, data are not available to determine how this number compares to the national average. Further, items in the surveys were not tested for reliability and due to the nature of self-reported measures; response bias could also impact the results of this study. However, the data do not suggest respondents were answering in a “desirable” way concerning TNDs, nor were respondents asked to recall beyond their recent memory, reducing the likelihood of bias. We recommend face-to-face surveys of smaller samples and in-depth interviews to attempt to confirm and extend current findings and overcome the limitations of the low response rates. Finally, it is likely that significant shifts in demand within the home buying public may not be reflected in the data presented in the current study. Data are required from the public to really understand the nature of the market and how it varies across and within regions.

There were a few limitations specific to the developer survey. The majority listed their primary occupation as “builder” rather than “developer.” However all participants who did not develop land were screened out at the beginning of the survey. A relatively small sample of developers participated in the study and the sample size was limited, thus reducing the generalizability of the findings and ability to evaluate differences across regions. Though the results cannot be considered definitive due to the low response rates, they provide a firm foundation for future research on this topic and provide possible leverage points for public health professionals seeking to work with developers and realtors.

An analysis was performed to compare NAR members who participated in the study with the 2008 NAR Member Profile Survey and the NAR Member Marketing Database. Where there were comparable data (primary business occupation, years in real estate, and state in which the office was located), the survey results very

closely corresponded with the general member demographics. A similar analysis could not be performed for the developer survey because the current study screened for those who had development experience, so by definition that group may have different characteristics than the entire NAHB membership. The NAHB does not collect demographic characteristics of developers.

The scientific consensus on the role of TNDs in supporting physical activity gives public health a stake in development policies and practices. Research designed to inform policy change strategies has focused on zoning laws and development policies,^{32,33} opinions and practices of legislators,³⁴ and public opinion.²⁰ However, developers build communities and realtors manage the buying and selling of land and buildings, so their engagement in efforts to increase the healthfulness of community design is essential. To our knowledge, this is the first study that investigated realtor and developer perspectives on factors that influence development, sales and perceived demand for TNDs. Realtors identified several challenges, including their perception that neighborhood features related to pedestrian design and walkability were not strongly valued by home buyers. Although developers have limited experience with TNDs, most welcomed government policies that would encourage more development of this type.

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