Measuring & Interpreting Demographic Changes

Robin Blakely
CaRDI (Community & Rural Development Institute)
Cornell University
http://www.cardi.cornell.edu

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Special thanks to….

- Professor Paul Eberts

Socioeconomic Trends 2000, and Well-being Indicators in NYS, 1950-2000.

http://www.cornell.edu/landgrant/resources/SocioEconomicTrends.pdf

- CaRDI

Community Visioning Notebook, Chapter 8: "Community Indicators"

http://www.cdtoolbox.net/community_planning/000159.html

Data, Data everywhere.....

What do we need data for?

How do we figure out what data to look for?

How to interpret the data once you find it?

What are some of the implications of demographic change?

How to use it for planning (setting goals, benchmarks, tracking, etc)

Data, Data everywhere.....

- With the internet there is a virtual explosion in the amount of data available

Data, Data everywhere.....

What do we need data for?

- Establish baseline measures (e.g., what is the poverty rate in our community?)
- Compare to other communities, organizations, etc. (e.g., how does our current poverty rate compare to surrounding communities in our area? To the state average?
- Establish goal for future (e.g., in 10-20 years we would like our poverty rate to decline by x%).
- Measure change over time and evaluate progress towards

Data, Data everywhere.....

How do we figure out what data to look for?

1. Identify Goals:
   - the purpose toward which effort is directed (e.g., better health, lower crime rates, etc)
2. Identify Indicators:
   - An activity or condition you can monitor or measure to assess whether progress is being made toward a goal (e.g., blood pressure or weight, number of arrests)
3. Identify Measures (This is the DATA!!!):
   - The actual counting, analysis or units required to measure an indicator. In the examples above, it could be the number of pounds over or under average weight, or the number of

- Some communities and organizations will have very specific goals which evolve over a long period of time.

Goals → Indicators → Data (Measures)

- Others will be just beginning to gather data in an exploratory manner – goals may not be apparent at the outset, and/or goals may change once data reveals some unknowns.

Data → Goals → Indicators → Data

- With the absence of specific goals, you may want to first develop a data profile of your community.

- This process may help identify areas to focus on, develop goals around, and collect additional data.

- Let's pretend we live in Tioga County and we're interested in learning some basic information about our county.

United States | New York | Tioga County

Tioga County, New York

2005 data not available for this geography

2000

View a Fact Sheet for a race, ethnic, or ancestry group

Census 2000 Demographic Profile Highlights:

Reference Map

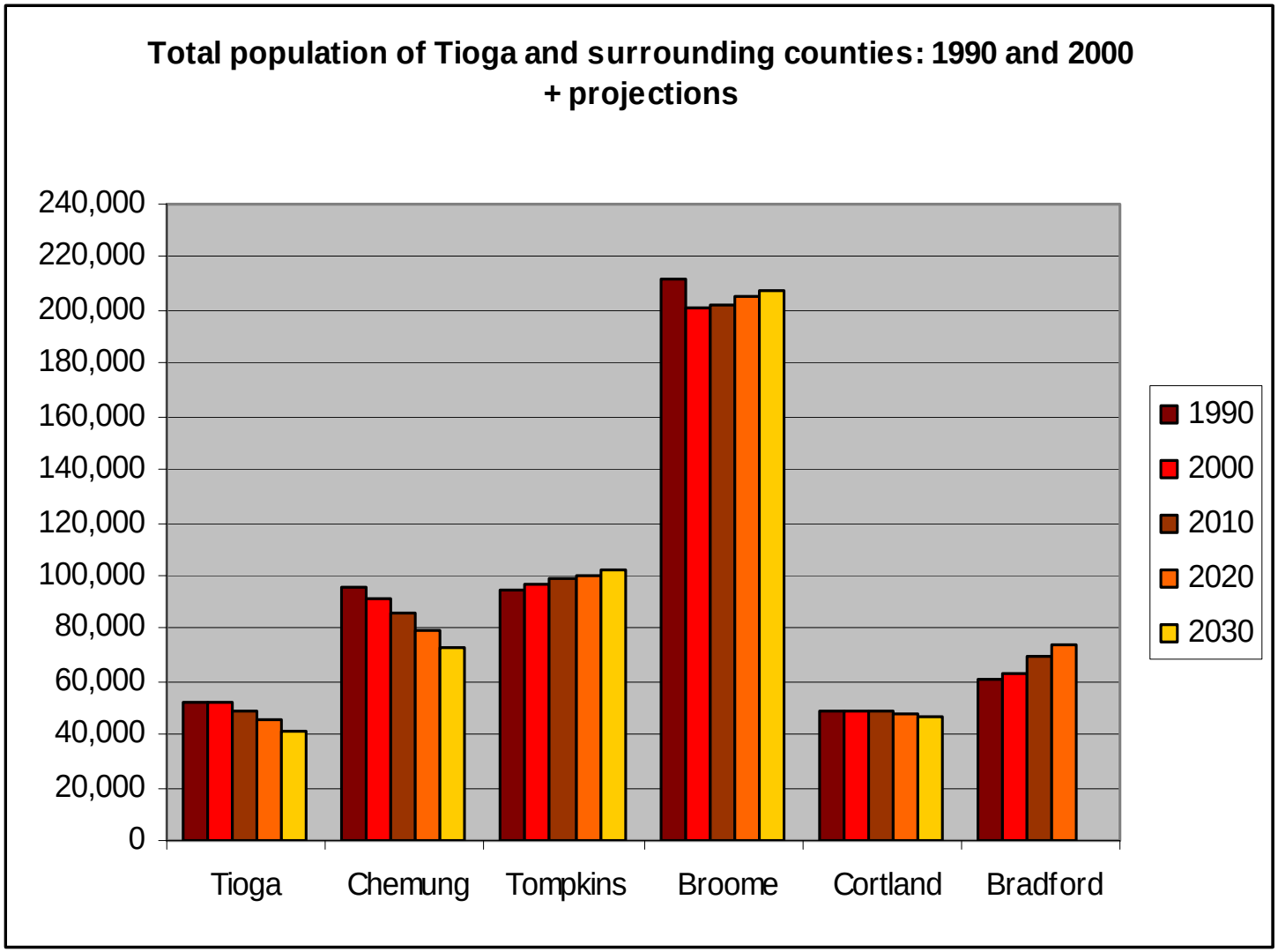
General Characteristics - show more >>	Number	Percent	U.S.		
Total population	51,784			map	brief
Male	25,576	49.4	49.1%	map	brief
Female	26,208	50.6	50.9%	map	brief
Median age (years)	38.0	(X)	35.3	map	brief
Under 5 years	3,262	6.3	6.8%	map	
18 years and over	37,777	73.0	74.3%		
65 years and over	6,785	13.1	12.4%	map	brief
One race	51,306	99.1	97.6%		
White	50,501	97.5	75.1%	map	brief
Black or African American	282	0.5	12.3%	map	brief
American Indian and Alaska Native	112	0.2	0.9%	map	brief
Asian	296	0.6	3.6%	map	brief
Native Hawaiian and Other Pacific Islander	7	0.0	0.1%	map	brief
Some other race	108	0.2	5.5%	map	
Two or more races	478	0.9	2.4%	map	brief
Hispanic or Latino (of any race)	509	1.0	12.5%	map	brief
Household population	51,273	99.0	97.2%	map	brief
Group quarters population	511	1.0	2.8%	map	
Average household size	2.60	(X)	2.59	map	brief
Average family size	3.04	(X)	3.14	map	
Total housing units	21,410			map	
Occupied housing units	19,725	92.1	91.0%		brief
Owner-occupied housing units	15,343	77.8	66.2%	map	
Renter-occupied housing units	4,382	22.2	33.8%	map	brief
Vacant housing units	1,685	7.9	9.0%	map	

Social Characteristics - show more >>	Number	Percent	U.S.		
Population 25 years and over	34,223				
High school graduate or higher	29,009	84.8	80.4%	map	brief

INTERPRETING DEMOGRAPHIC CHANGE:

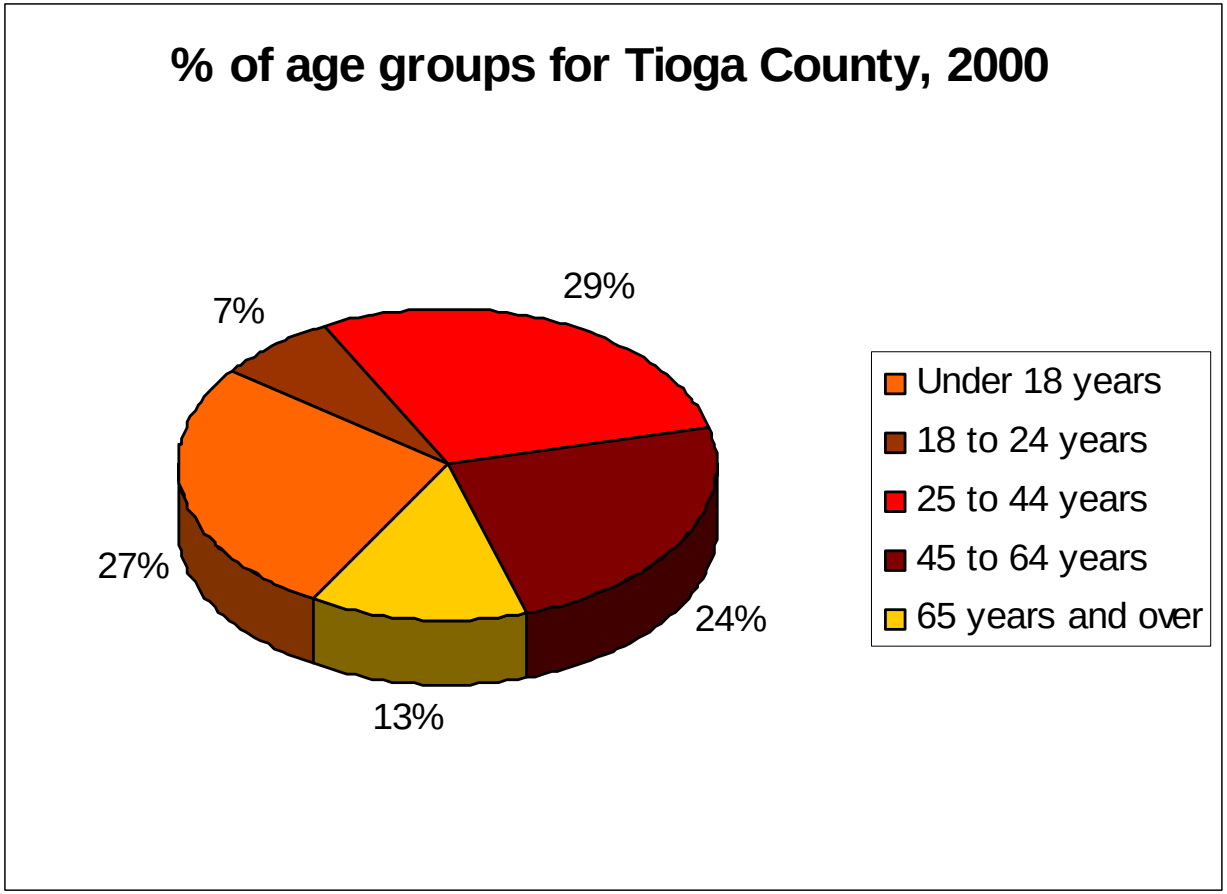
- Current data is the first step, but it doesn't provide much context, particularly for decision-making and planning.
- Need comparison points, such as adjacent counties, averages for the state, U.S., region, etc.
- Need trend data, past – present – future.
- What has the trend been?
- What is the trend projected to be?
- How do these trends compare to adjacent counties (or towns)?
- What does this mean? What are some of the implications that come to mind?
- Let's continue to use Tioga County as an example.....

For example, let's look at population change, 1990-2030



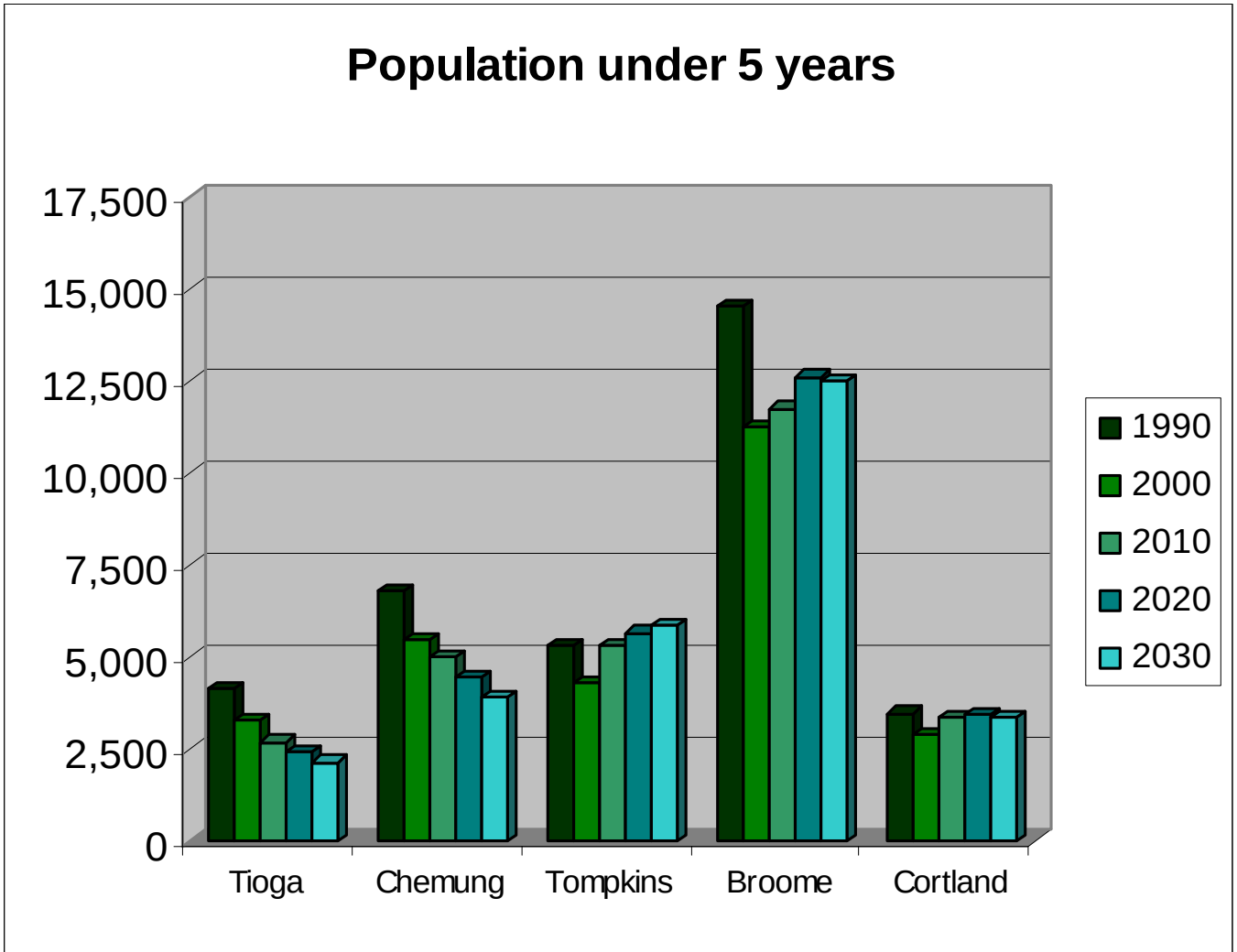
- Tioga County is projected to lose over 10,000 people in the next 20 years.
- How does that compare to the surrounding counties? Is Tioga similar or different?
- What might some of the consequences be?

But total population only tells part of the story…….look at composition.



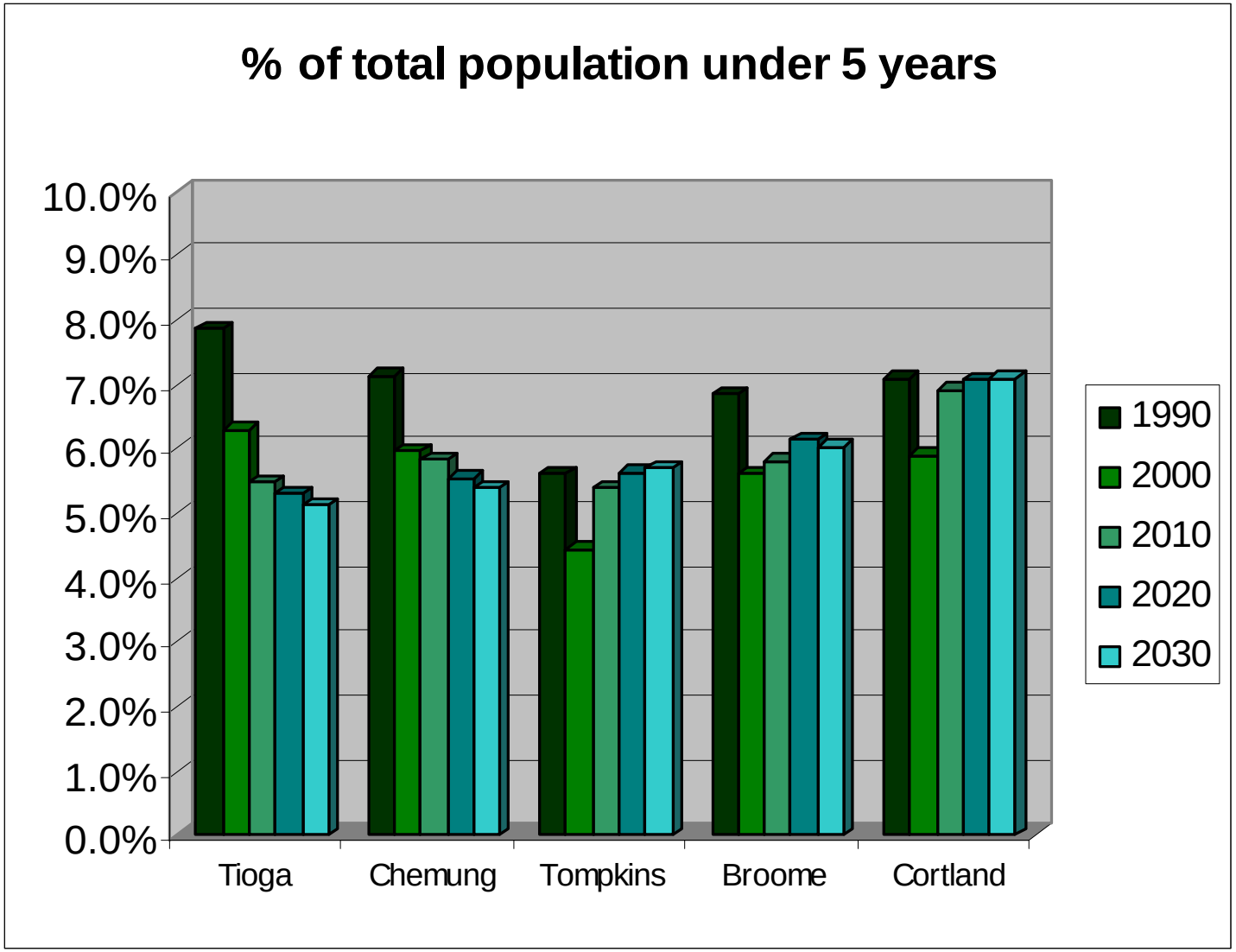
What might changes in this composition mean for Tioga County?

Total population only tells part of the story…….



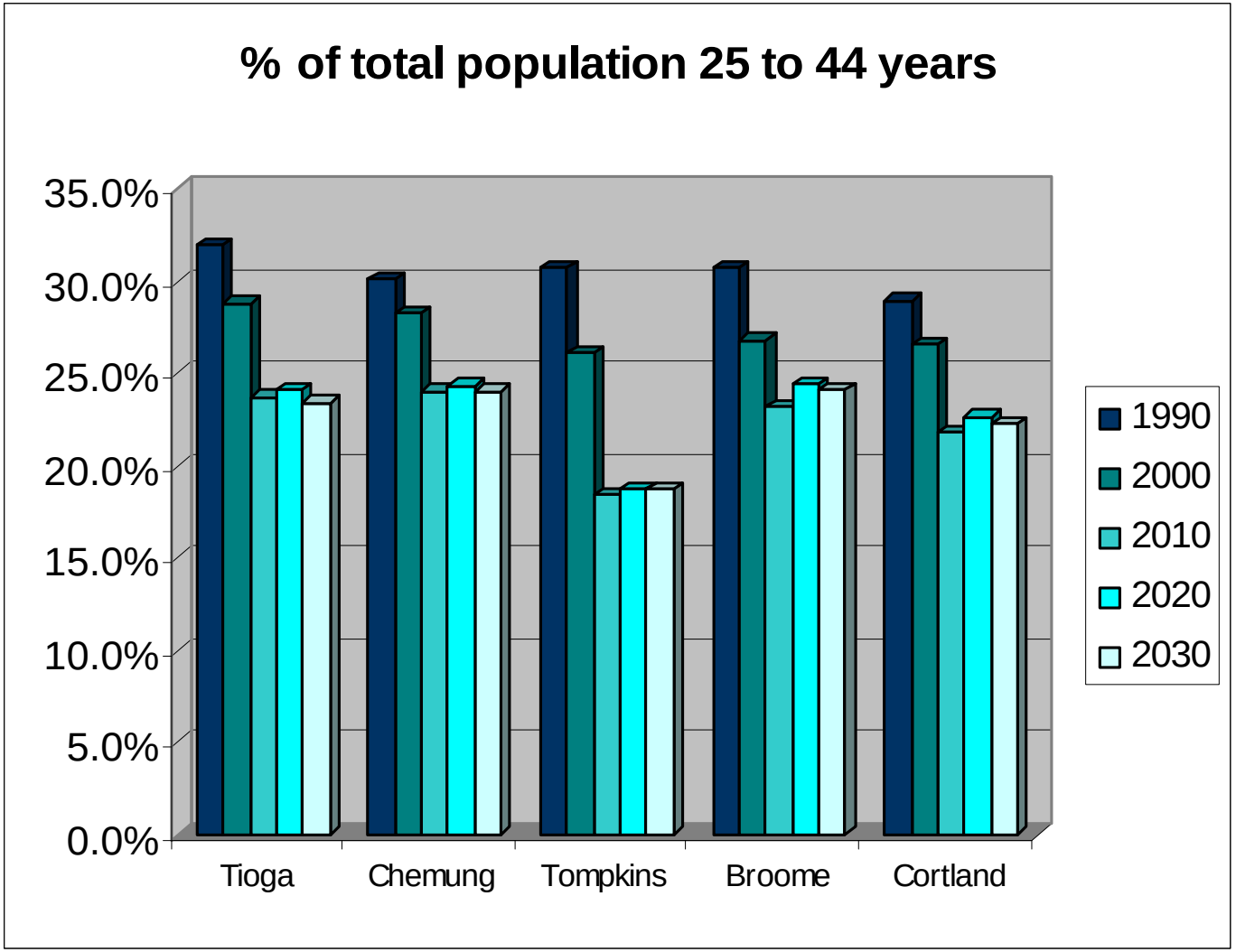
When we look at the projections for the population under 5 years of age, what are some of the implications that come to mind?

% vs.



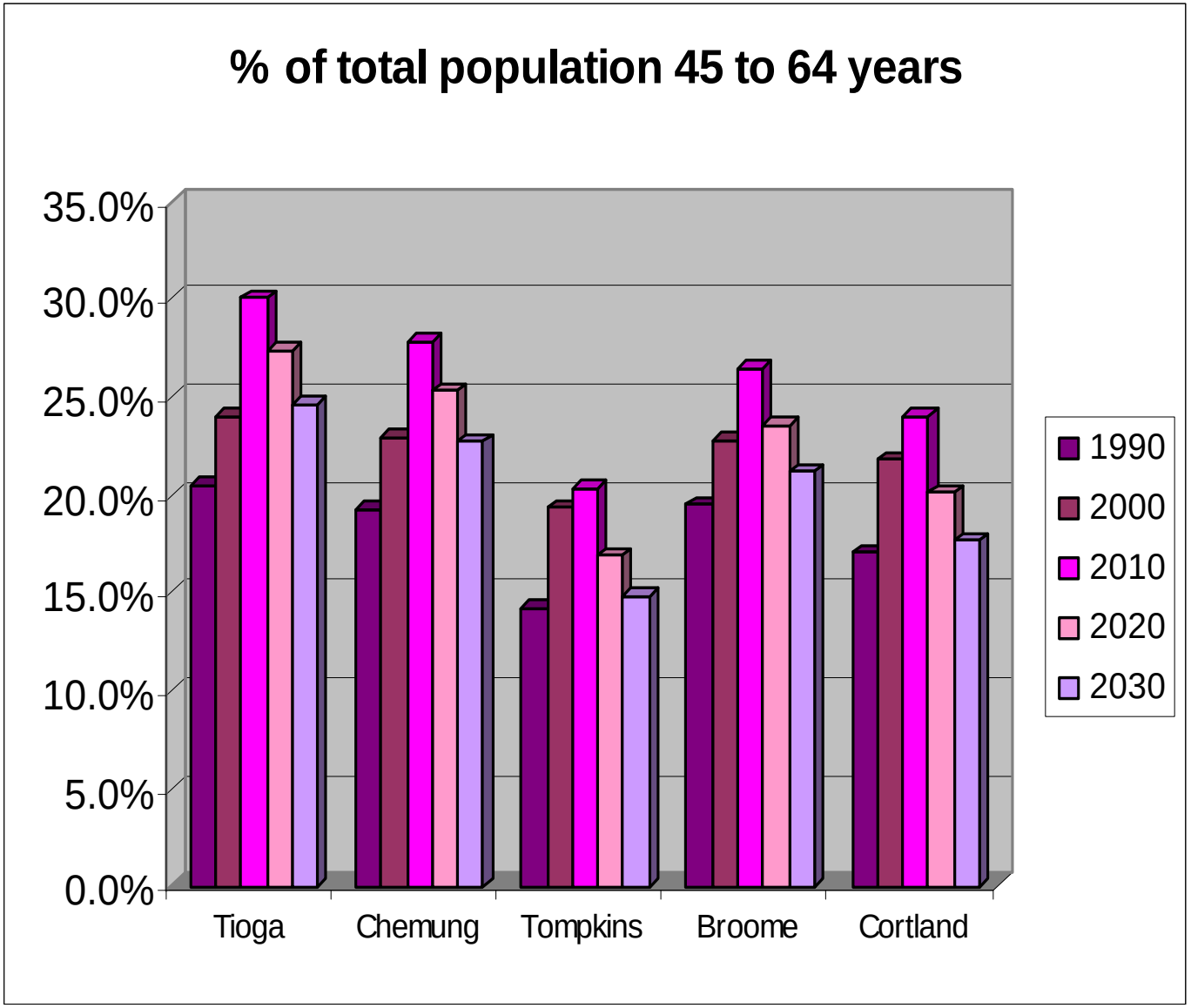
- By examining population age composition using percentages, it is now easier to compare Tioga's data to other counties that may have much bigger or smaller populations.
- What issues might Tioga County face in the next 20 years if these projections are true?
- Lowest % of under 5 year olds in "region"

And another slice of the population.....



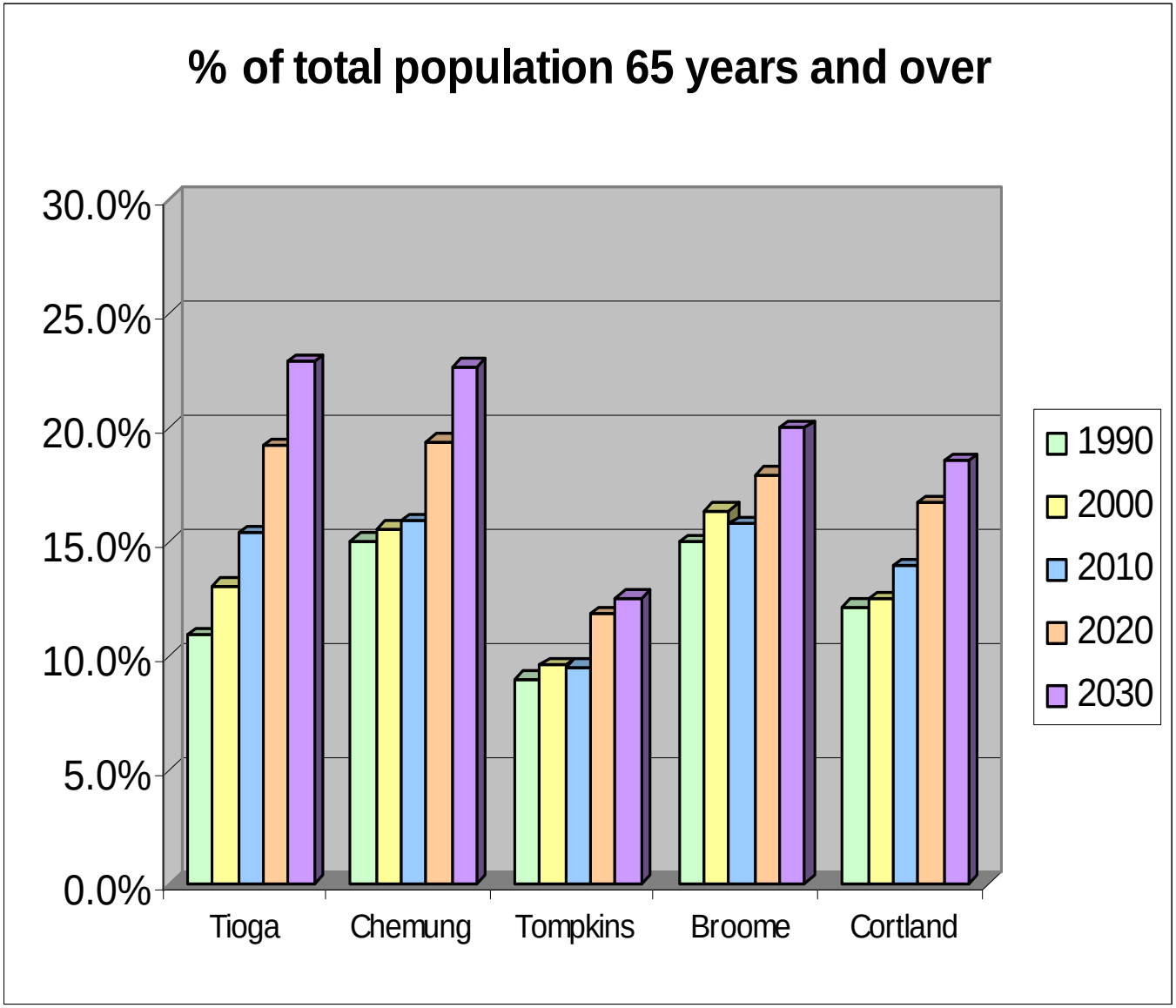
- The number of people age 25-44 years are projected to decline from about 15,000 in the year 2000 to 9,700 in the year 2030.
- While # declines, the % is projected to remain almost the same 2010-2030.
- Implications?
- Labor force issues?
- People in their prime child-rearing years

And another.....



- Tioga's population age 45-64 is projected to increase from 12,400 in 2000 to 14,800 in 2010, but decline to 10,200 by 2030 (from 30% to just under 25%).
- What are some of the implications?
- People in their prime earnings years.
- Impacts on housing markets?
- May include some early retirees & empty nesters.

And yet another……



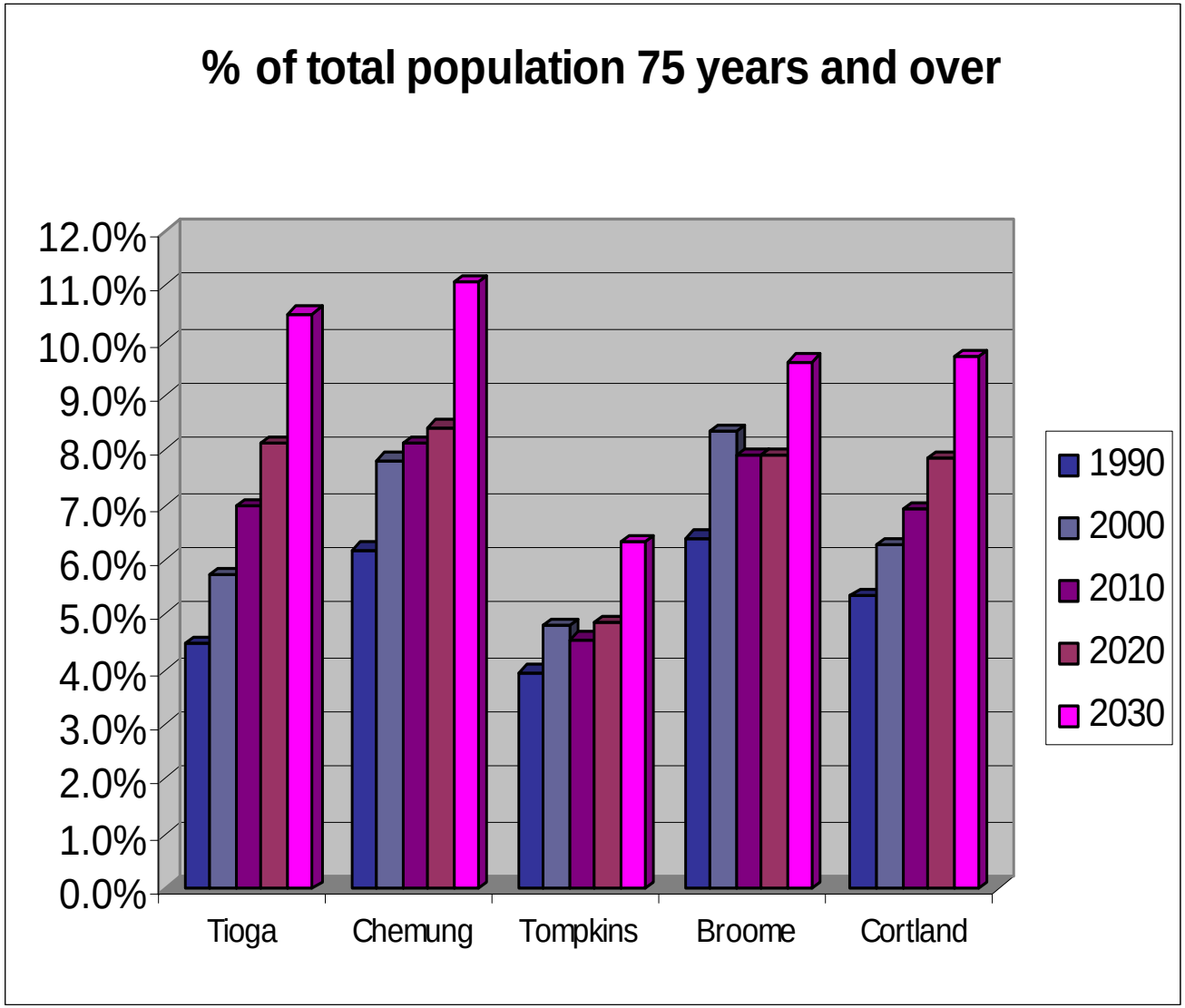
- Tioga's population 65+ is projected to increase from 5,700 in 2000 to 9,500 in 2030.
- This represents an increase from 13% to 23% of total population.

- What are some of the implications?

- Demand for health care and other social services?

- Potential cadre of community volunteers?

And lastly…



- Tioga's population 75+ is projected to increase from 2,963 in 2000 to 4,300 in 2030.
- This represents an increase from 5.7% to 10.5% of total population.
- What are some of the implications? Different from previous chart?

• How to interpret the data once you find it

1. Is the trend on a given indicator increasing or decreasing?
2. Is the increase large or small?
3. How "serious" is the issue; how high is the "bar" on the graph in relation to the "scale"?
4. Is the "gap" between similar (or adjacent) counties (or other geographic units) increasing or decreasing?
5. What might be some of the causes/implications of these changes?

Similar to the exercise that we have just gone through with population data.

• How to use data for planning (setting goals, benchmarks, tracking, etc)

1. What are major emerging trends?

2. What problems are emerging from them?

3. Have we formulated new goals because of the data? (if we don't like where the projections suggest we are headed, can we develop goals and action steps to lead us in a different direction?)
4. How to we create benchmarks and then track progress on our goals?

Common areas in Community Development to focus on for tracking demographic change

- **Basic Population Characteristics**
  - Total Population
  - Diversity (race/ethnic composition, foreign/native born, etc)
  - Potential Workforce (age composition, educational characteristics, etc)
  - Needs of Aged (% and # age 65+, % disabled, % elderly poverty, # in nursing homes, etc)

Workforce and the Service Sector:

% of Workforce Composed of Women
% Employed as Professionals and Managers % Self-Employed
% Employed in Retail and Wholesale Trade
% Employed in Health Care
% Employed in Education
% Employed in Finance, Insurance, and Real Estate
% Employed in Public Administration

Workforce and the Manufacturing Sector:

- % Employed in Manufacturing
- Number of Manufacturing Firms with 100+ Employees
- Number of Manufacturing Firms with 20-99 Employees
- Number of Manufacturing Firms with 1-19 Employees
- Average Numbers of Employees per Manufacturing Firm

Workforce and the Agricultural Sector:

- Percent Employed Extractive Industry
- Number of Farms
- Number of Acres Harvested
- Acres/Farm (Farm Size)
- Sales in Adjusted Total Market Value in 1000s of 1997 dollars
- Sales in $ Per Farm
- Sales $/Acre*1000

Socioeconomic Status (SES):

- Percent 25+ With Some College
- % without high school diploma
- Average Adjusted PC Income
- Families in Affluence
- % Homeowners vs. Renters
- Average Value of homes
- Crowded Housing
- Families in Poverty
- Children in Poverty

Family Structure & Issues:

- Percent Married Couples with Children under 18 Years of Age
- Percent Female-Headed Households with Children under 18 Years of Age
- Percent Disrupted Marriages
- Percent Births to Single Mothers
- Births to Teens 10-14 Years Old
- Births to Teens 15-17 Years Old

Health & Well-Being:

- Numbers of M.Ds. Per Capita
- Numbers of Nurses per Capita
- Ratio of Nurses to M.Ds.
- Non-Professional Health-Care Workers
- Infant Mortality
- Heart Disease Mortality (and stats for other diseases)

Public Sector Indicators:

- Percent Voting in Presidential Elections
- Index of Political Competition between Political Parties in Presidential Elections
- Per Capita Expenditures by County Governments
- Planning Boards in Towns
- Average Number of Land-Use Planning Ordinances
- Master (Comprehensive) Plans in Towns

Conclusions

We need data for:

- To determine where we are, where we've come from, and where we are likely to go.
- To help establish goals (where we WANT to go)
- To track progress and evaluate our actions taken toward goals.

How do we figure out what data to look for?

- Based on what our goals are, we choose appropriate indicators and measures (data) that best fit.

How to interpret the data once you find it?

- Look at adjacent counties, change over time, projections, what are potential implications of these changes (comparatively and otherwise)?

How to use it for planning?

- Setting benchmarks, tracking progress, evaluating success