EMPACT

Understanding the definition of a cancer center catchment area and thinking critically about catchment area determinants

A presentation by the EMPACT consortium

Lisa M. Rogers, EMPACT
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First, let's define catchment area...

It is the geographic area and population from which a cancer center attracts patients. Catchment areas are typically based on local or state boundaries such as a county, city or state A catchment area may be based on distance or time traveled. It is *the primary unit of comparison* for a center's enrollment of racial and ethnic minorities.

Catchment area

The National Cancer Institute - or NCI - allows *each cancer center* to define its own catchment area. Catchment area definition and population data are required as part of the Cancer Center Support Grant 5-year renewal process.

The following are relevant populations for NCI cancer centers...

- The community
- Cancer patients in the community
- Cancer patients treated at the center
- And cancer patients enrolled in clinical trials

Let's look at how the five EMPACT centers define catchment area...

- Center 1 uses their state cancer registry to define the catchment area.
- Center 2, located in a different region of the U.S. also uses their state cancer registry.
- Center 3 uses the entire population in counties adjacent to the center to define their catchment area.
- Center 4 uses the counties most adjacent to the city in which the center is located.
- Center 5 uses the state population.

For a detailed description of how one cancer center determined catchment area, read *Spatial Analyses Identify the Geographic Source of Patients at a National Cancer Institute Comprehensive Cancer Center* by Su and colleagues

Let's Look at Catchment Areas and Geographic Clusters of Patients

Consider how the geographic clusters of patients differ by institution.

Now let's consider the Population density and concentration of cancer centers

How would a center's catchment area differ in a location with low population density and a low concentration of cancer centers?

Versus here, where there is a *high* population density and a low concentration of cancer centers.

What about when there are both a high population density and high concentration of cancer centers?

Cancer centers in areas of low population and low concentration of cancer centers will typically have larger catchment areas, whereas, centers in areas of high population and high density of competing cancer centers will have smaller catchment areas.

Catchment Area Population Vs. Cancer Cases

How does immigration and aging population affect cancer case distribution?

In this area, the white population, in blue, skews older, while the Latino/Hispanic population, in orange, is much younger. Since cancer disproportionately affects older people, using only the population to determine the catchment area will be misrepresentative of patient population race and ethnicity.

In summary

- Each center must define its catchment area in response to *inclusion* of women and minorities.
- A catchment area should *encompass* the area from which center cancer patients are drawn.
- Catchment areas may range from a metropolitan area to a state area or multi-state area.
- Use of cancer cases vs. general population to define catchment area *will change* the catchment area population.
- Careful definition and understanding of the catchment area are needed to correctly create goals and assess progress.

We encourage you to continue learning about catchment areas by reading other course materials on http://www.empactconsortium.com