CHAPTER 13
HOSPICE SERVICES

Summary of Hospice Services and Supply

In the Fall of 2008, there were 263 hospice facilities (including hospice home care facilities and hospice inpatient and residential facilities) listed as being separately licensed in North Carolina according to the North Carolina Division of Health Service Regulation.

According to the hospice licensure law, as passed by the N.C. General Assembly in 1984, a hospice must provide home care services to terminally ill patients with a life expectancy generally not to exceed six months and their families, with provision for inpatient care or hospice residential care, as long as hospice inpatient is provided directly or through a contractual agreement. Data reported on the 2008 Licensure Renewal Applications indicate that over 38,000 hospice patients were served in 2006-2007.

There are 24 hospice inpatient facilities (comprising 195 beds) located in North Carolina, providing acute symptom control and pain management for hospice patients. Of the 24 facilities, 22 are free-standing hospice inpatient units -- located in Alamance, Buncombe, Cabarrus, Caldwell, Catawba, Cleveland, Cumberland, Forsyth, Gaston, Guilford, Harnett, Henderson, Iredell, Mecklenburg, New Hanover, Orange, Pitt, Robeson, Rockingham, Rutherford and Wayne counties. Two hospitals have hospice inpatient units as a part of the hospital, located in Mecklenburg and Wake counties. Hospice inpatient facilities located in Beaufort, Brunswick, Burke, Caldwell, Cleveland, Columbus, Davidson, Duplin, Durham, Johnston, Moore, Nash, Randolph, Richmond, Robeson, Rowan, Scotland, Surry, Union, and Wake counties will add a total of 140 beds. Further, additions to facilities in Alamance, Catawba, Forsyth, Harnett, Henderson, Robeson, Rutherford and Wayne counties will add 44 beds.

There are 19 hospice residential facilities (comprising 141 beds) currently providing residential hospice care for patients who have frail and elderly caregivers or who live alone. These facilities are located in Alamance, Buncombe, Burke, Cabarrus, Catawba, Cleveland, Forsyth, Gaston, Guilford, Henderson, Iredell, Mecklenburg, Richmond, Rockingham, Rutherford, Scotland, Union, and Wayne counties. The hospice residential facilities being developed in Caldwell, Cleveland, Davidson, Duplin, Johnston, Nash, Randolph, Rowan, Surry, Union and Wake counties will add a total of 60 beds. Further, an addition to the Wayne County facility will add six beds and the Alamance County facility will add two beds. Hospice of Henderson County, Inc. has received a certificate of need for a project that includes closure of the six residential beds at the Henderson County facility.

Changes from the Previous Plan

Hospice Home Care Offices:

The hospice home care methodology has been modified to utilize the two year trailing average growth rate in the number of deaths served and in the percent of deaths served. No need determinations are considered for counties with greater than three hospice offices per 100,000 population. This represents the statewide median number of hospice offices per 100,000. The threshold for a need determination has been changed to a deficit of greater than 90 deaths, which represents the approximate number of deaths served at

the statewide median number of hospice offices per 100,000 and the statewide median penetration rate (8.5 deaths per 1,000 [statewide death rate] x 100 = 850 deaths per 100,000 x 29.5 percent of deaths served = 251 deaths served by hospice / 3 hospice agencies = approx. 90). The placeholder for new hospice offices has been changed to the new threshold of 90 in order to maintain consistency.

Hospice Inpatient Beds:
The hospice inpatient bed methodology has been modified to utilize projected hospice days of care calculated by multiplying projected hospice admissions by the lower of the statewide median average length of stay or the actual average length of stay for each county. This selection reduces the inclusion of days of care that may not be appropriate for an inpatient facility. Projected hospice admissions are determined by the application of the two year trailing average growth rate in the number of admissions served to current admissions. Inpatient days as a percent of total days of care are determined to be approximately six percent based on statewide inpatient days as a percent of total days of care.

For the North Carolina 2009 State Medical Facilities Plan, references to dates have been advanced by one year. The SHCC Hospice Methodology Task Force recommends reviewing the hospice methodologies for the 2010 SMFP in order to determine the effect of all of these changes.

Basic Assumptions of the Method

Hospice Home Care Offices:

1. County mortality (death) rates for the most recent years (2002-2006) are used as the basis for hospice patient need projection. The five-year death rate for 2002-2006 is used as an indicator of deaths from all sites in each county and is not affected by changes in actual deaths from year to year.
2. Because previous years' data are used as the bases for projections, the two year trailing average growth rate in statewide number of deaths served should be calculated over the previous three years and applied to the current reported number of deaths served to project changes in the capacity of existing agencies to serve deaths from each county by the target year. Hospice deaths served will not be projected to exceed 60 percent of total deaths.
3. Median projected hospice deaths is projected by applying a projected statewide median percent of deaths served by hospice to projected deaths in each county. Projected statewide median percent of deaths served should be calculated by applying the two year trailing average growth rate in the statewide median percent of deaths served over the previous three years to the current statewide median percent of deaths served.
4. An additional hospice is indicated if: 1) the county's deficit is 90 or more, and 2) the number of licensed hospice offices located and serving patients in the county per 100,000 population is less than three.

Hospice Inpatient Beds:

1. Because previous years' data are used as the bases for projections, the two year trailing average growth rate in statewide hospice admissions should be calculated over the previous three years and applied to the current reported number of hospice admissions to project total hospice admissions.
2. Total projected admissions and the lower of the statewide median average length of stay per admission and each county's average length of stay per admission are used as the basis for projecting estimated inpatient days for each county.
3. Six percent of total estimated days of care in each county is used as a basis for estimating days of care in licensed inpatient hospice facility beds.

Hospice Residential Beds:
Rules for hospice residential beds were adopted by the Medical Care Commission in 1991. This category of beds does not have a methodology to project need and no need methodology has been recommended for the North Carolina 2009 State Medical Facilities Plan.

Sources of Data

Population:
Estimates and projections of population were obtained from the North Carolina Office of State Budget and Management.

Estimated active duty military population numbers were excluded for any county with more than 500 active duty military personnel. These estimates were obtained from the "Selected Economic Characteristics" portion of the 2000 Census, under the category of "Employment Status – Armed Forces."

Number of Deaths and Death Rates:
Death rates are from "Selected Vital Statistics for 2006 and 2002-2006, Vol. 1" published by the North Carolina Department of Health and Human Services, State Center for Health Statistics.

Utilization and Licensed Offices:
Total reported hospice patient deaths, admissions and licensed offices by county were compiled from the "2008 Annual Data Supplement to Licensure Application" as submitted to the North Carolina Department of Health and Human Services, Division of Health Service Regulation by existing licensed hospices and by home care agencies and health departments who meet the requirements of the rules for hospice licensure.

Application of the Standard Methodology

The steps in applying the projection methods are as follows:

Hospice Home Care Offices:

Step 1: The 2002-2006 death rate/1000 population is entered.

Step 2: The estimated 2010 population of each county is entered with adjustments for the counties with more than 500 active duty military personnel.

Step 3: Projected 2010 deaths for each county is calculated by multiplying the county death rate (Step 1) by the 2010 estimated population (Step 2) divided by 1000.

Step 4: The total number of reported hospice patient deaths, by county of patient residence, from annual data supplements to licensure applications is entered.

Step 5: The "Two Year Trailing Average Growth Rate in Statewide Number of Deaths Served" over the previous three years is calculated.

Year	*Statewide # of Deaths Served*	*Growth*
2005	20,932	
2006	22,653	8.2%
2007	24,897	9.9%
Two Year Trailing Average Growth Rate		**9.1%**

Step 6: 2010 number of hospice deaths served at two year trailing average growth rate is calculated by multiplying the number of reported hospice deaths (Step 4) by the statewide two year trailing average growth rate for deaths served for three years (Step 5) (# of reported deaths x 109.1% x 109.1% x 109.1%).

Step 7: 2010 number of hospice deaths served limited to 60 percent is calculated by multiplying the projected 2010 deaths for each county (Step 2) by 60 percent.

Step 8: Projected 2010 number of hospice deaths served is determined to be the lower of:

(a) Projected 2010 number of hospice deaths served at two year trailing average growth rate (Step 6), or;

(b) Projected 2010 number of hospice deaths served limited to 60 percent (Step 7).

Step 9: The "Two Year Trailing Average Growth Rate in Statewide Median Percent of Deaths Served" over the previous three years is calculated..

Year	*Median Percent of Deaths Served*	*Growth*
2005	26.15%	
2006	27.02%	3.3%
2007	29.50%	9.2%
Two Year Trailing Average Growth Rate		**6.3%**

Step 10: The projected median statewide percent of deaths served is calculated by multiplying the current statewide median percent of deaths served by the statewide two year trailing average growth rate for median percent of deaths served (Step 9)

for three years (statewide median percent of deaths served x 106.3% x 106.3% x 106.3% = 35.4%).

Step 11: Median projected 2010 hospice deaths is calculated by multiplying projected 2010 deaths (Step 3) by the projected statewide median percent of deaths served (Step 10).

Step 12: In counties for which additional hospice home care office need determinations were made, determine the difference between 90 and the number of hospice patient deaths reported by each new office in the county for which a need determination was made. If a new office reports more than 90 hospice patient deaths in the county for which a need determination was made, the office's reported number of hospice patient deaths is not adjusted for that county. If a new office reported fewer than 90 hospice patient deaths in the county for which a need determination was made, an adjustment "placeholder" equal to the difference between the reported number of hospice patient deaths and 90 is used. The adjustment "placeholder" is made through the third annual Plan following either: a) issuance of the Certificate of Need if the approved applicant had a hospice home care office in the county prior to the issuance of the certificate; or, b) certification of the new office that received the Certificate of Need in the county for which a need determination was made if the approved applicant did not have an existing hospice home care office in the county prior to the issuance of the certificate.

Step 13: Project the number of patients in need (deficit or surplus) by subtracting the median projected 2010 hospice deaths (Step 11) for each county from the projected 2010 number of hospice deaths served (Step 8) plus any adjustment (Step 12).

Step 14: The number of licensed hospice offices located in and reporting serving patients by county from annual data supplements to licensure applications is entered.

Step 15: The number of licensed hospice offices per 100,000 population for each county is calculated by dividing the number of licensed hospice offices (Step 14) by the 2010 estimated population (Step 2) divided by 100,000.

Step 16: A need determination would be made for a county if both of the following are true:

(a) The county's deficit (Step 13) is 90 or more, and;

(b) The county's number of licensed hospice offices per 100,000 population (Step 15) is less than 3.

A hospice office's service area is the hospice planning area in which the hospice office is located. Each of the 100 counties in the State is a separate hospice planning area.

Hospice Inpatient Beds:

Step 1: The total number of reported hospice admissions, by county of patient residence, from annual data supplements to licensure applications is entered.

Step 2: The total number of days of care, by county of patient residence, from annual data supplements to licensure applications is entered.

Step 3: The average length of stay per admission (ALOS) is calculated by dividing total days of care (Step 2) by total admissions (Step 1).

Step 4: The "Two Year Trailing Average Growth Rate in Statewide Number of Admissions" over the previous three years is calculated.

Year	***Statewide # of Hospice Admissions***	***Growth***
2005	25,702	
2006	28,666	11.5%
2007	30,907	7.8%
Two Year Trailing Average Growth Rate		**9.7%**

Step 5: Total 2012 admissions is calculated for each county by multiplying the total admissions (Step 1) by the statewide two year trailing average growth rate for hospice admissions admissions (Step 4) for five years (total admissions x 109.7% x 109.7% x 109.7% x 109.7% x 109.7%).

Step 6: 2012 days of care at the county ALOS is calculated by multiplying the total 2012 admissions (Step 5) by the ALOS per admission for each county (Step 3).

Step 7: 2012 days of care at the statewide ALOS is calculated by multiplying the total 2012 admissions (Step 5) by the statewide median ALOS per admission.

Step 8: Projected 2012 days of care for inpatient estimates is determined to be the lower of:

(a) 2012 days of care at the county ALOS (Step 6), or;

(b) 2012 days of care at the statewide ALOS (Step 7).

Step 9: Projected 2012 inpatient days is calculated for each county by multiplying the projected 2012 days of care for inpatient estimates (Step 8) by 6 percent.

Step 10: Projected inpatient hospice beds is calculated by dividing 2012 projected inpatient days (Step 9) by 365 days and then dividing by 0.85 to adjust for a targeted 85 percent occupancy.

Step 11: Adjust the projected inpatient hospice beds (Step 10) by the number of licensed hospice beds in each county, CON approved/licensure pending beds, and beds available in previous Plans.

Step 12: Calculate occupancy rates of existing hospice inpatient facilities based on 2008 annual data supplements to licensure application.

Step 13: Adjust projected beds in Step 11 for occupancy rates of existing facilities in counties (Step 12) that are not at 85 percent occupancy. Indicate for such counties either zero or the deficit indicated in Step 11, which ever is greater. Further adjustments are made for CON approved closures.

Step 14: For single counties with a projected deficit of six or more hospice inpatient beds, applications for single county Hospice Inpatient Units will be considered. The single county need equals the projected deficit. (A hospice inpatient facility bed's service area is the hospice inpatient facility bed planning area in which the bed is located. Each of the 100 counties in the State is a separate hospice inpatient facility bed planning area.)

The Long-Term and Behavioral Health Committee and the State Health Coordinating Council will consider petitions for adjusted need determinations that are filed in accordance with provisions outlined in Chapter 2 of the State Medical Facilities Plan.

Applicants for Certificate of Need are encouraged to contact the Certificate of Need Section to arrange pre-application conference prior to submission of application.