### South Carolina's Integrated Database: Changing Hearts and Minds with Data:

Presentation to the State Administrators Meeting – July 2007

SC Department of Social Services and the SC Budget and Control Board's Office of Research and Statistics

#### **Child Care Services**

• ABC Voucher program (CCDF)

Child Care Licensing

Head Start Collaboration Office

Social Services Block Grant

### Systemic Issues In Child Care Licensing

No Policy Manual

• 7 Approach Databases

Manual Data Collection

### Systemic Issues In ABC Voucher Program

- Reliable But Inflexible Payment System
- Labor-Intensive Fiscal Process

- Paper Checks
- Manual Data Collection for Quality Monitoring Activities

### **The Vision**

- Design a Web-Based Child Care Data System
- Utilize Current Technology
- Use Licensing System as the Base
- Improve Efficiency
- Pre-screen for Vouchers, USDA

### The Vision (cont'd)

- Incorporate Environmental Rating Scales
- Collect Market Rate Data
- Automate Payments (EBT)
- Redesign Website
- Collect Data on Children to Measure Outcomes

#### Office of Research & Statistics: Who are We?

 SC Budget and Control Board is a Service Agency in South Carolina

• Neutral, no programmatic responsibilities

Statistical and Research-focused



### The Integrated System

- Built using existing systems (legacy systems from state agencies and private sector)
- Create a Unique Tracking Number (not related to any other number)
- Identifiers are separated from the statistical data. Use only the statistical data
- Data always "owned" by the originating agency. Must have permissions to use and/or link any data
- Employ HIPPA Best practices and have extensive security measures.

### Linking Data Sets

 Records are linked for the same individual using a unique tracking number

 Tracking number is random so cannot be unencrypted to identify the individual

 An individual is assigned the same number over time

### Putting Data Into the Hands of the Users

- Evaluation of interventions and programs by:
  - Assessing outcomes
  - Understanding interaction with other programs and providers
  - Analyzing aggregate data
  - Accessing analytic data cubes
  - Managing client care
  - Creating a research capacity

### Analytic Data Cubes

Asked and Answered in the Click of a Mouse

### What Is an Analytic Cube?

- A way to "slice and dice" through large amounts of data
- Define "slicers," characteristics that are important to analyzing the subject population
- Pre-aggregate the linked data by all possible combinations of "slicers"
- Web Based

## What is a cube? An example with the Seniors' Cube



## You can create a subgroup for your research focus

| 14.                       |                                  | 65-69 + | 70-74 🕀 | 75-79 🛨 | 80-84 🗄 | 85 + 🗄 |
|---------------------------|----------------------------------|---------|---------|---------|---------|--------|
| Slicers                   | All Diagnosis Grouping           | 4,188   | 4,530   | 5,051   | 5,269   | 5,326  |
| ## _Patients per 10K Pop_ | ■ I.INFECTIVE & PARASITIC DIS    | 11      | 12      | 14      | 15      | 16     |
| 2003                      | II.NEOPLASMS                     | 617     | 625     | 621     | 530     | 364    |
| Charges                   | III.ENDOCRINE,NUTRIT.& META.     | 188     | 226     | 292     | 343     | 426    |
| Count Visits ER Year      | ■ IV.BLOOD & BL-FORMING ORGANS   | 48      | 64      | 74      | 87      | 97     |
| Count Visits IP Year      | U.MENTAL DISORDERS               | 69      | 78      | 92      | 119     | 136    |
| Count Visits IPER Year    | VI.NERVOUS SYS.& SENSE ORGANS    | 478     | 678     | 857     | 844     | 593    |
| County Name Residence     | UII.DIS OF CIRCULATORY SYS       | 781     | 932     | 1.135   | 1.292   | 1.417  |
| Day of Week               | VIII.DIS OF THE RESP.SYS.        | 429     | 492     | 577     | 666     | 838    |
| Diag Proc Grouping        | ■ IX.DIS OF THE DIGESTIVE SYS    | 835     | 898     | 972     | 954     | 856    |
| Disposition               | X.DIS OF GENITOURINARY SYS       | 326     | 360     | 421     | 478     | 587    |
| Procedure Groupings       | XII.DIS OF SKIN/SUBCUT.TISSUE    | 142     | 146     | 166     | 183     | 214    |
| Length of Stay            | XIII.MUSCULOSKELETAL/CONN.TI.    | 597     | 623     | 653     | 605     | 503    |
| MDC DRG                   | XIV.CONGENITAL ANOMALIES         | 13      | 14      | 15      | 15      | 10     |
| VR Deceased               | XV.CAUSES.PERINATAL MORB/MORT    |         |         |         |         |        |
| NCHS Groupings            | ■ XVI.SYMPTOMS/ILL-DEFINED COND. | 831     | 908     | 1.016   | 1 109   | 1 161  |
| All Race                  | XVII.ACCIDENTS/POISON/VIOLENCE   | 684     | 734     | 801     | 1.050   | 1 301  |
| Region Residence          | XVIII.SUPPLEMENTARY CLASS.       | 304     | 320     | 357     | 347     | 308    |
| Treatment Setting         | XX.ACC.POIS & VIOL (EXT.CAUSE)   | 504     | 520     | 557     | 347     | 500    |
| Urban Rural Residence     |                                  | 1       | 4       | -       | 4       |        |
| ₩682:↑:↓ ₩% ∽ ₡           | CODE OUT OF RANGE                | 73      | 83      | 117     | 149     | 194    |

≡ 21

### You can expand a row to see subcategories

| Slicers  |   |  | Patients per 10K Pop_ by Age over Diagnosis Grouping for 2003  |           |      |    |  |  |  |  |  |  |
|--|---|--|--|-----------|------|----|--|--|--|--|--|--|
| ## _Patients per 10K Pop_  | ## _Patients per 10K Pop_                         |  |  |           |      |    |  |  |  |  |  |  |
| Charges  | 65-69 🕀   | 70-74 <sup>⊕</sup>                       | 75-79 <sup>±</sup>   | 80-84     | 85 + | ŧ  |  |  |  |  |  |  |
| ☐ III.ENDOCRINE,NUTRIT.& META.   | 188   | 226                                      | 292  | 343       | 42   | 26 |  |  |  |  |  |  |
| DIS OF THYROID GLAND   | 9   | 9  | 10   | 10 area   |      | 7  |  |  |  |  |  |  |
| ■ DIABETES MELLITUS W/O COMP.  | 26  | 28                                       | 33   | 593 31    | 3    | 31 |  |  |  |  |  |  |
| ■ DIABETES MELLITUS W/COMP.  | 71  | 78                                       | 92   | 91        | 8    | 31 |  |  |  |  |  |  |
| OTHER ENDOCRINE DIS  | 10  | 14                                       | 16   | 214 16    | 1    | 18 |  |  |  |  |  |  |
|  | DN ENITAL ANOMAL                                  | 13 13 13 13 13 13 13 13 13 13 13 13 13 1 | 523         653         60           14         15         1   | 503<br>10 |      |    |  |  |  |  |  |  |
| ■ NUTRIT.DEFIC.& META. DIS   | 84  | 110                                      | 159  | 211       | 30   | 07 |  |  |  |  |  |  |
| VR Deceased       III XVIII.         NCHS Groupings       III XX.AC         Payor Primary Expected       III Race         All Race       III CODE         Treatment Setting       III Residence         Urban Rural Residence       III Race | C,POIS & VIOL(EXT.CAU<br>DE FOUND<br>OUT OF RANGE | 304<br>SE) 1<br>73<br>304                | 320         357         347           1         1         1           83         117         149           320         357         357 | 7 308     |      |    |  |  |  |  |  |  |

## You can view a chart of your selection

|     | Patients per 10K Pop_ by Age over Diagnosis Grouping for 2003 |       |   |                        |             |            |                    |         |         |        |  |              |
|-----|---|-------|---|------------------------|-------------|------------|--------------------|---------|---------|--------|--|--------------|
|     | Slicers   |       | Í |                        |             | 65-69 🕀    | 70-74 <sup>±</sup> | 75-79 🕀 | 80-84 + | 85 + 🗄 |  | ▲            |
|     | ## _Patients per 10K Pop_                                     |       |   | All Diagnosis Grouping |             | 4,188      | 4,530              | 5,051   | 5,269   | 5,326  |  |              |
|     | 2003  |       |   | ■ I.INFECTIVE & PARAS  | ITIC DIS    | 11         | 12                 | 14      | 15      | 16     |  |              |
|     | Charges   |       |   |                        |             | 617        | 625                | 621     | 530     | 364    |  |              |
| ∦   | Count Visite ED Visit   |       |   |                        | LAND        | 188        | 220                | 292     | 343     | 420    |  |              |
| ∦   | Count visits EK Year  |       |   | DIABETES MELLITU       | S W/O COMP. | 26         | 28                 | 33      | 31      | 31     |  | _            |
|     | Count Visits IP Year  |       |   | DIABETES MELLITU       | S W/COMP.   | 71         | 78                 | 92      | 91      | 81     |  |              |
|     | Count Visits OP Year  |       |   |                        | DIS         | 10         | 14                 | 16      | 16      | 18     |  |              |
|     | Count Visits IPER Year  |       |   |                        |             | 1          |                    |         |         |        |  |              |
| 400 | County Name Residence   |       |   |                        | NG ORGANS   | 84         | 110                | 159     | 211     | 307    |  |              |
|     | Day of Week   |       |   |                        |             |            |                    | 92      |         |        |  |              |
|     |   |       |   |                        | NSE ORGANS  |            |                    | 857     |         |        |  |              |
|     | Diag Proc Grouping  |       |   |                        | DRY SYS     | 781        | 932                | 1,135   | 1,292   | 1,417  |  |              |
| 320 | Disposition   | 400   |   |                        |             |            |                    |         |         |        |  | GLAND        |
|     | Gender  |       |   |                        |             |            |                    |         |         |        |  |              |
|     | Procedure Groupings   |       |   |                        |             |            |                    |         |         |        |  | WIO CO       |
| 240 | Length of Stay  | 320   |   |                        |             |            |                    |         |         |        |  |              |
|     | MDC DRG   |       |   |                        |             |            |                    |         |         |        |  | W/COMP       |
|     | VR Deceased   | 240   |   |                        |             |            |                    |         |         |        |  |              |
| 160 | NCHS Groupings  |       |   |                        |             |            |                    |         |         |        |  | DIS          |
|     | Payor Primary Expected  | 100   |   |                        |             |            |                    | 1       |         |        |  | OBESITY      |
|     | All Race 🗾  |       |   |                        | _           | 1          |                    |         | _       |        |  |              |
| 80  | R Residence   | 80    |   |                        |             |            |                    |         |         |        |  | & META DIS   |
|     |   |       |   |                        |             |            |                    |         |         |        |  | a META, DIO  |
|     |   |       |   |                        |             | <b>a</b> . |                    |         |         |        |  |              |
| 0   | 65-69   | 70-74 |   | 75-79                  | 8           | 0-84       | 2 2                |         | 85      | +      |  | 85 +         |
|     | 백 🖪 📑 🗤 🖬 🍗 🖓 1   |       |   |                        |             |            |                    |         |         |        |  | 😲 III 5 🚍 27 |

#### We can see which diagnoses are the most prevalent among a particular treatment setting, such as Emergency Room

| 194-<br>194                     | Patients per 10K Pop_ by Age over Diagnosis Grouping for 2003 |                    |                     |           |                    |          |                    |                    |                     |        |  |  |
|---------------------------------|---|--------------------|---------------------|-----------|--------------------|----------|--------------------|--------------------|---------------------|--------|--|--|
| SlicersPatients pe              | r 10K Pop_  | by Age             | over Dia            | gnosis G  | irouping           | tor 200  | 3, Emer            | gency Ro           | oom                 |        |  |  |
| ## _Patients per 10K Pop        | All Age   | 45-49 <sup>±</sup> | 50-54 <sup>±</sup>  | 55-59 🗄   | 60-64 <sup>±</sup> | 65-69 🗄  | 70-74 <sup>⊕</sup> | 75-79 ⊕            | 80-84 <sup>±</sup>  | 85 + 🗄 |  |  |
| ∃ All Diagnosis Grouping        | 1,624   | 1,057              | 1,674               | 1,582     | 1,562              | 1,684    | 1,783              | 2,051              | 2,324               | 2,638  |  |  |
| ■ I.INFECTIVE & PARASITIC DIS   | l All Diagnosis Grc <mark>6</mark>                            | Tre6               | tmen <mark>s</mark> | Settin    | 5                  | 4        | 4                  | 5,051 5,25         | 5,326 5             | 3      |  |  |
| II.NEOPLASMS                    | 6   | 3                  | 4                   | 6         | 7                  | 7        | 8                  | 14<br>621 <b>8</b> | 8                   | 8      |  |  |
|                                 |   | 31                 | 56                  | 62        | 68                 | 77       | 92                 | 292 116            | 123                 | 136    |  |  |
| ■ IV.BLOOD & BL-FORMING ORGAN   | S 6   | -3                 | npate <sub>5</sub>  | 4         | 6                  | 6        | 9                  | 11                 | 13                  | 20     |  |  |
| ■ V.MENTAL DISORDERS            |   | 54                 | Emer80              | IC/ R058  | 47                 | 44       | 44                 | 857 52             | 5359                | 72     |  |  |
| VI.NERVOUS SYS.& SENSE ORGAN    | NS 62   | 55                 | 0000-81             | nt Stir66 | 61                 | 58       | 51                 | 54                 | 56                  | 49     |  |  |
| ■ VII.DIS OF CIRCULATORY SYS    | BIX DIS OF 131  | 50                 | 97                  | 107       | 126                | 153      | 175                | 972 232            | 280                 | 315    |  |  |
| VIII.DIS OF THE RESP.SYS.       | ■ x1 ots o 193  | 139                | 212                 | 197       | 196                | 209      | 205                | 211                | 219                 | 234    |  |  |
| ■ IX.DIS OF THE DIGESTIVE SYS   | <sup>10</sup> XILMUSC 121                                     | 84                 | 126                 | 114       | 114                | 119      | 137                | 653 149            | <sup>5</sup> 175    | 192    |  |  |
| ■ X.DIS OF GENITOURINARY SYS    |   | 68                 | 103                 | 98        | 97                 | 106      | 114                | 135                | 167                 | 225    |  |  |
| ■ XII.DIS OF SKIN/SUBCUT.TISSUE | 57  | 47                 | 67                  | 61        | 56                 | 57       | 53                 | 52                 | <sup>1,161</sup> 52 | 64     |  |  |
| ■ XIII.MUSCULOSKELETAL/CONN.T   | I.ª xy msue 210   | 156                | 245                 | 212       | 199                | 202      | 211                | 233                | 258                 | 275    |  |  |
| ■ XIV.CONGENITAL ANOMALIES      | H XX ACC,POIS &   |                    |                     |           | 1                  | 1        | 1                  | 1                  | 1                   | 1      |  |  |
| ■ XVI.SYMPTOMS/ILL-DEFINED COI  | ND. 0800 504  | 312                | 501                 | 473       | 483                | 532      | 586                | 117 672            | 770                 | 845    |  |  |
| E XVII.ACCIDENTS/POISON/VIOLE   | VCE 523   | 373                | 570                 | 520       | 477                | 500      | 520                | 621                | 722                 | 915    |  |  |
| ■ XVIII.SUPPLEMENTARY CLASS.    | 49  | 32                 | 47                  | 45        | 45                 | 46       | 56                 | 68                 | 84                  | 98     |  |  |
| ■ XX.ACC,POIS & VIOL(EXT.CAUSE) |   | 563                |                     | OK.       |                    | Californ |                    |                    |                     |        |  |  |
| E CODE OUT OF RANGE             | 28  | 24                 | 34                  | 29        | 26                 | 26       | 24                 | 29                 | 28                  |        |  |  |

#### And then see Diagnoses for Emergency Room Charted

|     | `₩Pa                      | ntients per 10K Pop_ by Age over | r Diagno | osis Gr            | ouping             | for 200            | )3, Eme            | ergency              | Room               |         |         |         |              |
|-----|---------------------------|----------------------------------|----------|--------------------|--------------------|--------------------|--------------------|----------------------|--------------------|---------|---------|---------|--------------|
|     | Slicers                   |                                  | All Age  | 45-49 <sup>±</sup> | 50-54 <sup>±</sup> | 55-59 <sup>±</sup> | 60-64 <sup>±</sup> | 65-69 <sup>±</sup> 7 | 70-74 <sup>±</sup> | 75-79 🖽 | 80-84 🗄 | 85 + 🗄  | <u> </u>     |
|     | ## _Patients per 10K Pop_ | 🗆 All Diagnosis Grouping         | 1,624    | 1,057              | 1,674              | 1,582              | 1,562              | 1,684                | 1,783              | 2,051   | 2,324   | 2,638   |              |
|     | 2003                      | I.INFECTIVE & PARASITIC DIS      | 6        | 6                  | 8                  | 7                  | 5                  | 4                    | 4                  | 5       | 5       | 3       |              |
|     |                           | II.NEOPLASMS                     | 6        | 3                  | 4                  | 6                  | 7                  | 7                    | 8                  | 8       | 8       | 8       |              |
|     | Charges                   | III.ENDOCRINE,NUTRIT.& META.     | 68       | 31                 | 56                 | 62                 | 68                 | 77                   | 92                 | 116     | 123     | 136     |              |
|     | Count Visits ER Year      | IV.BLOOD & BL-FORMING ORGANS     | 6        | 3                  | 5                  | 4                  | 6                  | 6                    | 9                  | 11      | 13      | 20      |              |
|     | Count Visits IP Year      |                                  | 58       | 54                 | 80                 | 58                 | 47                 | 44                   | 44                 | 52      | 59      | 72      |              |
|     | Count Visite OD Vear      |                                  | 121      | 55                 | 81                 | 107                | 126                | 150                  | 175                | 222     | 280     | 215     |              |
|     |                           | UII DIS OF THE RESP SYS          | 102      | 120                | 212                | 107                | 120                | 200                  | 205                | 232     | 280     | 315     | _            |
|     | Count Visits IPER Year    | IX.DIS OF THE DIGESTIVE SYS      | 193      | 84                 | 126                | 114                | 114                | 110                  | 4/                 | 1.10    |         | 192     |              |
| 700 | County Name Residence     | T V. DIS OF GENITOURINARY SYS    | 105      | 68                 | 103                |                    |                    |                      |                    |         |         | 225     |              |
|     | Tax of Wee                | E XII.DIS OF SKIN/SUBOUT.TISSUE  | 57       | 47                 |                    | 61                 | 50                 |                      |                    |         |         | 64      |              |
|     | day of week               | E XIII.MUSC JLOSKELET AL/CONN.T. | 210      | 156                |                    | 212                | 194                |                      |                    |         |         | 275     |              |
| 560 | 0 Diar Proc Grouping      | G XIV.CONG NITAL AND MALLES      |          |                    |                    |                    |                    |                      |                    |         |         | 1       |              |
|     | Disposition               |                                  |          |                    |                    |                    |                    |                      | -11                |         | -11     |         |              |
|     | Gender                    |                                  |          |                    |                    |                    |                    |                      |                    |         |         |         |              |
| 420 |                           |                                  |          |                    |                    |                    |                    |                      |                    |         |         |         |              |
|     | Procedure droupings       |                                  |          |                    |                    |                    |                    |                      |                    |         |         |         |              |
| 280 | 0 Length of Stav          |                                  |          |                    |                    |                    |                    |                      |                    |         |         |         |              |
|     | MDC DRG                   |                                  |          |                    |                    |                    |                    |                      | K IT               |         |         |         |              |
|     | VR Decease t              |                                  |          |                    |                    |                    |                    |                      |                    |         | Y.      |         |              |
| 140 |                           |                                  |          |                    |                    |                    |                    |                      |                    |         |         |         |              |
|     |                           |                                  |          |                    |                    | 4                  |                    |                      |                    |         |         |         |              |
| 0   | Pays mary F               |                                  |          |                    |                    |                    |                    |                      |                    |         |         |         |              |
|     | I. All II. IV. V          | . VI. VII.DIS VIII.DIS IX        | DIS X.   | DIS OF             | XII.DIS            | XIII               |                    | V. S                 |                    | XX41    |         | . XX.A  | CC, CODE     |
|     | INF NE EN BLOOD MEN       | ITAL NERV OF OF THE OF           | THE G    | ENIT               | OF                 | © ≊MU.             | XILDIS C           | XVI.                 |                    | XVII    | SUPP    | L POI   | S& OUT OF    |
|     | & NUTRIT. & BL- DISC      | DR SYS.& CIRCU RESP. D           | IG       | SYS                | SKIN/S.            | TI.                | KINIS A            | WMD                  | A                  | oour    | CLAS    | S. VIOL | (E RANGE     |
|     | PAR & META. FORM          | SENSE SYS SYS. S                 | SYS      |                    | TISSUE             | Ξ                  | ISSUE 2            | o time i             | SND. A             |         | ····    | CAU     | ISE)         |
|     | DIS ORG DIS               | ORG ORG ORG.                     |          |                    |                    |                    |                    | DEFL                 |                    |         |         |         |              |
|     |                           | <b>4</b> 0                       |          |                    |                    |                    |                    |                      |                    |         |         |         | Q    10 = 19 |
|     |                           |                                  | _        |                    | _                  | _                  |                    | CONE                 | D                  |         |         |         | v 10 - 15    |

#### We can dig a little deeper and see what subcategories make up "symptoms/ill-defined conditions" or "accidents"

| _ | 1    |             |          |          |         |        | tionte | - 10K De | n by A | Ð                 | - Dia F           | leig Group F | Flore 20  | Ŧ     | t) z Bra | , E            | F                  | ·          | E E        |
|---|------|-------------|----------|----------|---------|--------|--------|----------|--------|-------------------|-------------------|--------------|-----------|-------|----------|----------------|--------------------|------------|------------|
|   | _    | EVIT        | ACCID    | ENTS/    |         |        | -      | All Age  | 45-49  | ) <sup>⊕</sup> 50 | D-54 <sup>⊕</sup> | 55-59 🕀      | 60-64     | 65-69 | • 70-74  | 1 <sup>±</sup> | 75-79 <sup>±</sup> | 80-84 🗄    | 85 + 🖽     |
|   | Ξ    | XVI.SY      | MPTOM    | 1S/ILL-I | DEFINE  | D CON  | VD.    | 504      | 31     | 12                | 501               | 473          | 483       | 532   | 2 58     | 86             | 672                | 770        | 845        |
|   |      | E CON       | VULSI    | ONS      |         |        |        | 16       | , 1    | 14                | 19                | 18           | 16        | 1     | 3        | 12             | 12                 | 15         | 17         |
|   |      | ⊕ CHE     ■ | ST PAI   | N        |         |        | C      | 136      | 9      | 97                | 159               | 143          | 136       | 130   | 5 14     | 40             | 147                | 151        | 165        |
|   |      | ∃ ABD       | OMINA    | L PAIN   |         | XT C   |        | 90       | 7      | 70                | 103               | 90           | 86        | 92    | 2 8      | 89             | 100                | 103        | 107        |
|   |      | ⊞ OTH       | IER SYN  | IPTOMS   | 5       |        | C      | 302      | 16     | 53                | 267               | 261          | 282       | 32    | 38       | 80             | 461                | 551        | 615        |
|   |      | ± 0         |          |          |         | R MED  | CAR    | -        |        | 0                 | 15                | 139          |           | 190 3 | 20       | 20             |                    | 234 22     | 27         |
| 5 | 000  |             |          | OINOLIN  | 1/OTHE  | KHED   | - CAIN | - 2      |        | -                 |                   | 1/           | 2         | 2 2   | •        | - 00           |                    |            | 21         |
|   | -    |             |          |          |         | FACE   |        |          |        |                   | 4                 |              |           |       | 4        |                |                    |            | 11         |
|   | 3000 |             |          |          |         |        |        |          |        |                   |                   |              |           |       |          |                |                    |            |            |
| 4 |      |             |          |          |         |        |        |          |        |                   |                   |              |           |       |          |                | -                  |            |            |
|   | 2400 |             |          |          |         |        |        |          |        |                   | _                 |              |           |       |          |                |                    |            |            |
|   |      |             |          |          |         |        |        |          |        |                   |                   |              |           |       |          |                |                    |            |            |
| 3 |      |             |          |          |         |        |        |          |        |                   |                   |              |           |       |          |                |                    |            |            |
|   | 1800 |             |          |          |         |        |        |          |        |                   |                   |              |           |       |          |                |                    |            |            |
|   |      |             |          |          |         |        |        |          |        |                   |                   |              |           |       |          |                |                    |            |            |
| 2 | 1200 |             |          |          |         |        |        |          |        |                   |                   |              |           |       |          |                |                    |            |            |
|   |      |             |          |          |         |        |        |          |        |                   |                   |              |           |       |          |                |                    |            |            |
|   | 800  |             |          |          |         |        |        |          |        |                   |                   |              |           |       |          |                |                    |            |            |
| 1 |      |             | -        |          |         |        |        |          |        | _                 |                   |              | =         |       |          |                |                    |            |            |
|   | 0    | PUPNO       | OTHER    | POISON   | POISONI | OTHE   |        | ERACTL   | EDACTU | ERACTU            |                   |              |           |       |          |                |                    |            |            |
|   |      | BURNS       | INJURIES | AGENTS   | & EXT.  | EXT.   | SUR    | AND FACE | COLUMN | & ULNA            | A OF FF           | PRACTU       | WITHOUT F | ACK & | INJ (E)  | XC.            | INTERNAL LAU       | OUND. WOUN | D. EFFECTS |
|   |      |             |          |          | CAUSES  | CAUSES | MED.   | BONES    |        |                   |                   |              | FRACT     | NECK  | SKUL     | .L) (          | CHEST/A E          | YE/E OTHE  | R          |
| q |      |             |          |          |         |        | CARE   |          |        |                   |                   |              |           |       |          |                |                    |            |            |

## Instead of patient counts, we can look at the hospital ER charges for 2003

| 14. jak                | Patic Charges by Age over Diagnosis Grouping for 2003, Emergency Room Room |                  |                 |                 |                 |                    |   |  |  |  |  |
|------------------------|--|------------------|-----------------|-----------------|-----------------|--------------------|---|--|--|--|--|
| Slicers 15             |  |                  |                 |                 |                 |                    |   |  |  |  |  |
| ## Charges             |  |                  |                 |                 |                 |                    |   |  |  |  |  |
| 2003 03                |  |                  |                 |                 |                 |                    |   |  |  |  |  |
| Charges                |  | Sub Total        | 65-69 🖽         | 70-74           | 75-79 ₺         | 80-84 <sup>±</sup> | 85 +                                      |  |  |  |  |
| Count Visits ER Year   | 🗆 All Diagnosis Grouping   | \$193,858,302.00 | \$45,904,475.00 | \$43,033,135.00 | \$40,691,853.00 | \$33,082,947.00    | \$31,145,892.00                           |  |  |  |  |
| Count Visits IP Year   | ■ I.INFECTIVE & PARASITIC DIS  | \$110,799.00     | \$37,549.00     | \$24,244.00     | \$25,871.00     | \$15,707.00        | \$7,428.00                                |  |  |  |  |
| Counc visits in real   | II.NEOPLASMS   | \$870,527.00     | \$247,478.00    | \$206,511.00    | \$220,895.00    | \$112,594.00       | \$83,049.00                               |  |  |  |  |
| Count Visits OP Year   |  | \$7,456,713.00   | \$1,561,402.00  | \$1,583,722.00  | \$1,697,456.00  | \$1,327,265.00     | \$1,286,868.00                            |  |  |  |  |
| Count Visits IPER Year | ■ IV.BLOOD & BL-FORMING ORGANS   | \$1,039,920.00   | \$205,175.00    | \$234,809.00    | \$212,367.00    | \$193,079.00       | \$194,490.00                              |  |  |  |  |
| County Name Residence  | U.MENTAL DISORDERS   | \$3,756,903.00   | \$909,213.00    | \$771,136.00    | \$819,818.00    | \$642,637.00       | \$614,099.00                              |  |  |  |  |
| Councy Name Residence  | ■ VI.NERVOUS SYS.& SENSE ORGANS  | \$2,696,368.00   | \$771,472.00    | \$649,224.00    | \$559,549.00    | \$433,116.00       | \$283,007.00                              |  |  |  |  |
| Day of Week            | ■ VII.DIS OF CIRCULATORY SYS   | \$24,862,668.00  | \$5,375,673.00  | \$5,352,234.00  | \$5,638,949.00  | \$4,547,552.00     | \$3,948,260.00                            |  |  |  |  |
| Diag Proc Grouping     |  | \$15,731,045.00  | \$4,152,420.00  | \$3,760,926.00  | \$3,293,701.00  | \$2,445,746.00     | \$2,078,252.00                            |  |  |  |  |
| Disposition            | ■ IX.DIS OF THE DIGESTIVE SYS  | \$10,541,339.00  | \$2,725,255.00  | \$2,424,044.00  | \$2,187,113.00  | \$1,710,405.00     | \$1,494,522.00                            |  |  |  |  |
| Disposition            | ■ X.DIS OF GENITOURINARY SYS   | \$10,601,590.00  | \$2,513,536.00  | \$2,151,740.00  | \$2,068,462.00  | \$1,801,567.00     | \$2,066,285.00                            |  |  |  |  |
| Gender                 | ■ XII.DIS OF SKIN/SUBCUT.TISSUE  | \$1,783,796.00   | \$518,030.00    | \$428,360.00    | \$347,418.00    | \$237,968.00       | \$252,020.00                              |  |  |  |  |
| Procedure Groupings    | ■ XIII.MUSCULOSKELETAL/CONN.TI.  | \$11,155,152.00  | \$2,821,017.00  | \$2,563,268.00  | \$2,280,871.00  | \$1,870,806.00     | \$1,619,190.00                            |  |  |  |  |
| Length of Stay         | ■ XIV.CONGENITAL ANOMALIES   | \$44,695.00      | \$5,664.00      | \$13,874.00     | \$6,847.00      | \$7,317.00         | \$10,993.00                               |  |  |  |  |
| Length of Stay         | XVI.SYMPTOMS/ILL-DEFINED COND.   | \$65,778,539.00  | \$15,994,794.00 | \$15,236,831.00 | \$13,817,622.00 | \$10,992,633.00    | \$9,736,659.00                            |  |  |  |  |
| MDC DRG                | XVII.ACCIDENTS/POISON/VIOLENCE   | \$34,451,913.00  | \$7,476,766.00  | \$7,009,963.00  | \$6,847,162.00  | 62\$6,202,683.00   | 15\$6,915,339.00                          |  |  |  |  |
| VR Deceased            | ■ XVIII.SUPPLEMENTARY CLASS.   | \$1,662,001.00   | \$300,037.00    | \$341,137.00    | \$371,187.00    | 68 \$326,402.00    | 98 \$323,238.00                           |  |  |  |  |
| NCHS Groupings         | ■ XX.ACC,POIS & VIOL(EXT.CAUSE)  | \$2,748.00       | \$2,602.00      | \$146.00        |                 |                    |   |  |  |  |  |
| NCHS Groupings         | CODE OUT OF RANGE  | \$1,310,744.00   | \$286,392.00    | \$280,966.00    | \$296,565.00    | 29 \$215,470.00    | 30 \$231,351.00                           |  |  |  |  |
| Payor Primary Expected |  | Search           | UK.             | Cancel          |                 |                    |   |  |  |  |  |
| All Race               |  |                  |                 |                 |                 |                    |   |  |  |  |  |
| Region Residence       |  |                  |                 |                 |                 |                    |   |  |  |  |  |
| Emergency Room         |  |                  |                 |                 |                 |                    |   |  |  |  |  |
|                        |  |                  |                 |                 |                 |                    | $(\mathbf{i}) \parallel \mathbf{i} \in 1$ |  |  |  |  |

## Over \$34 million was billed for all accidents treated in the ED

| Steers         **           2003  | 19-<br>1  | Charges by Age ov               | er Diagnosis Gr                         | ouping for 200  | 3, Emergency                            | Room            |   |                 |                |  |
|---|---|---------------------------------|---|-----------------|---|-----------------|---|-----------------|----------------|--|
| ## Charges         Sub Total         65-69         70-74         75-79         80-84         85 +         Image: Count Visits BY Pear           Count Visits BY Year         Image: Sub Total         65-69         70-74         75-79         80-84         85 +         Image: Sub Total         65-69         70-74         75-79         80-84         85 +         Image: Sub Total         65-69         70-74         75-79         80-84         85 +         Image: Sub Total         65-69         70-74         75-79         80-84         85 +         Image: Sub Total         65-69         70-74         75-79         80-84         85 +         Image: Sub Total         65-69         70-74         75-79         80-84         85 +         Image: Sub Total         65-69         70-74         75-79         80-84         85 +         Image: Sub Total         65-69         70-74         75-79         80-84         85 +         Image: Sub Total         65-69         70-74         75-79         80-84         85 +         Image: Sub Total         65-69         70-74         75-79         80-84         82 + 89         82 + 89         82 + 89         82 + 89         82 + 89         82 + 89         82 + 89         82 + 89         82 + 89         82 + 89         82 + 89         82 + 49   | Slicers   |                                 |   |                 |   |                 |   |                 |                |  |
| 2003           Charges         Sub Total         65-69         70-74         73-79         80-84         85 +         0           Count Visits ER Year         III.NECTIVE & PARASITIC DIS         \$119,3855,30200         \$43,033,135.00         \$33,082,947.00         \$33,082,947.00         \$31,145,982.00           Count Visits DP Year         III.NECTIVE & PARASITIC DIS         \$110,799.00         \$24,244.00         \$25,247.10         \$115,707.00         \$57,428.00           Count Visits OP Year         III.NEDOLASMS         \$970,527.00         \$247,478.00         \$210,897.450.00         \$11,227,450.00         \$13,307,220.00         \$122,7265.00         \$12,265.00         \$1,287,270.00         \$13,907,900.00         \$221,420.00         \$214,280.00         \$214,280.00         \$13,449.000         \$14,490.00         \$14,490.00         \$14,490.00         \$14,490.00         \$14,490.00         \$14,490.00         \$14,490.00         \$14,490.00         \$214,280.00         \$214,280.00         \$214,280.00         \$13,93,290.00         \$224,00         \$3,309,247.00         \$12,642.683.00         \$10,000,00         \$14,490.00         \$14,490.00         \$14,490.00         \$14,490.00         \$14,490.00         \$14,490.00         \$14,490.00         \$15,93,240.00         \$13,871.400         \$2,649.400         \$2,149.400         \$2,424.00         \$13,872.00 <td>## Charges</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>  | ## Charges  |                                 |   |                 |   |                 |   |                 |                |  |
| Charges         Sub Total         65-69         70-74         75-79         80-84         85 +         8           Count Visits ER Year         Count Visits IP Year         \$110,899.00         \$37,549.00         \$24,244.00         \$25,871.00         \$33,082,947.00         \$31,145,892.00           Count Visits IP Year         II.INEPECTIVE & PARASITIC DIS         \$110,799.00         \$37,549.00         \$24,244.00         \$25,871.00         \$12,984.00         \$83,049.00           Count Visits DP Year         II.INEPCLASMS         \$870,527.00         \$247,478.00         \$21,287.00         \$13,277,265.00         \$13,279,409.00           Count Visits DPER Year         II.INEODCRINE.NUTRIT.& META.         \$7,456,713.00         \$1,561,402.00         \$1,583,722.00         \$21,287.00         \$13,272,265.00         \$1,289,409.00           Count Visits DPER Year         IV.I.BLOOC A. B.L-FORMING ORGANS         \$1,039,207.00         \$271,173.00         \$11,810.00         \$149,490.00           Disposition         UV.I.NERVOUS SYS.& SENSE ORGANS         \$2,696,368.00         \$771,172.00         \$644,2637.00         \$2,472,482,600         \$2,375,973.00         \$2,375,973.00         \$2,482,606.00         \$2,375,973.00         \$2,482,482,600.00         \$2,474,74,70,745,774.00         \$2,474,745,745.00         \$2,472,482,00         \$2,4782,400         \$2,478,400.05   | 2003  |                                 |   |                 |   |                 |   |                 |                |  |
| Count Visits ER Year         ■ All Diagnosis Grouping         \$193,858,302.00         \$45,904,475.00         \$43,033,135.00         \$40,691,853.00         \$33,062,947.00         \$31,145,892.00           Count Visits IP Year         ■ LINFECTURE & PARASITIC DIS         \$110,799.00         \$37,549.00         \$220,895.00         \$115,707.00         \$7,428.00           Count Visits IP Year         ■ LINFECTURE & PARASITIC DIS         \$110,799.00         \$37,549.00         \$220,895.00         \$113,277,265.00         \$11,280,900         \$121,890,00         \$120,895.00         \$11,287,265.00         \$11,280,900.00         \$11,890,970.00         \$139,079.00         \$194,990.00           Count Visits IP R Year         ■ V.BLOOD & BL-PORMING ORGANS         \$10,999,200.00         \$203,175.00         \$212,367.00         \$193,079.00         \$194,490.00           D V.BLOOD & BL-PORMING ORGANS         \$1,039,920.00         \$205,175.00         \$212,367.00         \$193,079.00         \$194,490.00           D V.BLOOD & BL-PORMING ORGANS         \$1,039,920.00         \$271,1472.00         \$549,224.00         \$559,549.00         \$43,3116.00         \$283,007.00           D V.BLORD & Stat/Stat/Stat/Stat/Stat/Stat/Stat/Stat   | Charges   |                                 | Sub Total                               | 65-69 🖽         | 70-74 <sup>±</sup>                      | 75-79 🖽         | 80-84 🖽                                 | 85 +            |                |  |
| Count Visits IP Year       □ LINFECTIVE & PARASITIC DIS       \$110,799.00       \$37,549.00       \$24,244.00       \$25,871.00       \$15,707.00       \$7,428.00         Count Visits OP Year       □ LINFOCTIVE & PARASITIC DIS       \$107,99.00       \$247,478.00       \$200,951.00       \$212,995.00       \$112,594.00       \$83,049.00         Count Visits DP Kear       □ IV.BLOOD & BL-FORMING ORGANS       \$1,039,202.00       \$205,175.00       \$212,367.00       \$1327,265.00       \$1,286,868.00       \$1,377,138.00       \$1,389,722.00       \$193,079.00       \$194,490.00         Day of Week       □ VI.BOOD & BL-FORMING ORGANS       \$2,696,368.00       \$771,472.00       \$649,224.00       \$55,589,549.00       \$433,116.00       \$283,000.00         Day of Week       □ VI.DIS OF CIRCULATORY SYS       \$24,862,668.00       \$5,375,673.00       \$5,538,949.00       \$44,457,552.00       \$23,948,260.00         Disposition       □ X.DIS OF THE RESP.SYS.       \$15,731,045.00       \$2,127,255.00       \$2,424,044.00       \$2,108,145.00       \$23,796,73.00       \$5,688,949.00       \$24,457,466.00       \$2,078,252.00         Disposition       □ X.DIS OF GENITOURINARY SYS       \$10,61,339.00       \$2,125,174.00       \$2,18,1171.00       \$1,810,1567.00       \$2,424,044.00       \$2,180,113.00       \$2,7428,20.00       \$2,424,44.00       \$2,68,462.00       \$   | Count Visits ER Year  | All Diagnosis Grouping          | \$193,858,302.00                        | \$45,904,475.00 | \$43,033,135.00                         | \$40,691,853.00 | \$33,082,947.00                         | \$31,145,892.00 |                |  |
| Count Visits OP Year         B II.NEOPLASMS         \$870,527.00         \$247,478.00         \$200,511.00         \$220,895.00         \$112,594.00         \$83,049.00           Count Visits OP Year         III.ENDOCRINE,NUTRIT.& META.         \$7,456,713.00         \$1,583,722.00         \$1,697,456.00         \$1,327,265.00         \$1,226,508.50.0         \$1,226,508.50.0         \$1,927,265.00         \$1,226,508.50.0         \$193,079.00         \$194,490.00           Count Visits IPER Year         IV.MENOD & 8L-FORMING ORGANS         \$1,039,920.00         \$205,175.00         \$213,480.90.00         \$212,367.00         \$193,079.00         \$194,490.00           Double Visits IPER Year         IV.MENOD & 8L-FORMING ORGANS         \$1,039,920.00         \$205,175.00         \$212,367.00         \$193,079.00         \$194,490.00           Disposition         UN.NERVOUS SYS.& SENSE ORGANS         \$2,696,368.00         \$771,172.00         \$649,224.00         \$5,538,949.00         \$4,547,552.00         \$2,445,746.00         \$2,078,252.00           Disposition         UI.IDIS OF THE DIGESTIVE SYS         \$10,511,339.00         \$2,725,255.00         \$2,244,044.00         \$2,187,113.00         \$1,710,405.00         \$1,469,452.00           MILDIS OF THE DIGESTIVE SYS         \$10,611,390.00         \$2,2513,536.00         \$2,2151,740.00         \$2,268,462.00         \$1,801,567.00         \$2,700,62,200.00  | Count Visits IP Year  | ■ I.INFECTIVE & PARASITIC DIS   | \$110,799.00                            | \$37,549.00     | \$24,244.00                             | \$25,871.00     | \$15,707.00                             | \$7,428.00      |                |  |
| Count Visits OP Year  |   | II.NEOPLASMS                    | \$870,527.00                            | \$247,478.00    | \$206,511.00                            | \$220,895.00    | \$112,594.00                            | \$83,049.00     |                |  |
| Count Visits IPER Year       □ IV.BLOOD & BL-FORMING ORGANS       \$1,039,920.00       \$205,175.00       \$234,809.00       \$212,367.00       \$193,079.00       \$194,490.00         County Name Residence       □ V.MENTAL DISORDERS       \$3,756,903.00       \$909,213.00       \$771,136.00       \$819,818.00       \$642,637.00       \$614,099.00         Day of Week       □ V.INERVOUS SYS.8 SENSE ORGANS       \$2,696,368.00       \$771,472.00       \$649,224.00       \$559,549.00       \$433,116.00       \$228,090.00         Diag Proc Grouping       □ VI.IDIS OF THE RESP.SYS.       \$15,731,045.00       \$3,760,926.00       \$3,293,701.00       \$2,445,746.00       \$2,076,252.00         Disposition       Gender       □ IX.DIS OF THE DIGESTIVE SYS       \$10,51,399.00       \$2,242,044.00       \$2,187,113.00       \$1,171,0405.00       \$1,494,522.00         Disposition       □ X.DIS OF GENITOURINARY SYS       \$2,163,359.00       \$2,424,044.00       \$2,187,113.00       \$1,494,522.00         Dix DIS OF FILE DIGESTIVE SYS       \$10,51,599.00       \$2,288,360.00       \$2,242,041.00       \$2,268,462.00       \$1,801,567.00       \$2,206,820.00         WILLOIS OF SENVSUBCUT.TISSUE       \$1,783,796.00       \$2,286,360.00       \$2,280,871.00       \$1,870,806.00       \$1,619,190.00         WILLING VILLORENTIAL ANOMALILES       \$44,695.00       \$55,664.0   | Count Visits OP Year  | Ⅲ III.ENDOCRINE,NUTRIT.& META.  | \$7,456,713.00                          | \$1,561,402.00  | \$1,583,722.00                          | \$1,697,456.00  | \$1,327,265.00                          | \$1,286,868.00  |                |  |
| County Name Residence <sup>B</sup> v.MENTAL DISORDERS        \$3,756,903.00       \$909,213.00       \$771,136.00       \$819,818.00       \$642,637.00       \$614,099.00         Day of Week          U.I.NERVOUS SYS.& SENSE ORGANS        \$2,966,368.00       \$771,1472.00       \$649,224.00       \$559,549.00       \$433,116.00       \$223,007.00         Diag Proc Grouping          Disposition           Gender           W.II.DIS OF CIRCULATORY SYS        \$24,862,668.00       \$5,375,673.00       \$53,2234.00       \$3,243,701.00       \$2,445,746.00       \$2,078,252.00         Disposition          Gender           W.II.DIS OF CIRCULATORY SYS         \$10,541,339.00       \$2,725,255.00       \$2,128,7113.00       \$1,710,405.00       \$1,494,522.00         B v.DIS OF GENITOURINARY SYS        \$10,601,590.00       \$2,2151,740.00       \$2,088,462.00       \$1,801,567.00       \$2,220,662,825.00         B v.II.MUSCULOSKLETAL/CONN.TIL        \$1,1155,152.00       \$2,221,017.00       \$2,260,2750,268,000       \$2,220,871.00       \$1,874,080.60       \$2,220,000         B v.II.ACCIDENTS/POISON/VIOLENCE       \$34,4551,913.00       \$5,664.00       \$13,874.00       \$5,684.700       \$7,137.00       \$10,993.00         WILLOS OF THE RESP.SYD          S2,748,02       \$2,748,05       \$2,602.00       \$146   | Count Visits IPER Year  |                                 | \$1,039,920.00                          | \$205,175.00    | \$234,809.00                            | \$212,367.00    | \$193,079.00                            | \$194,490.00    |                |  |
| Country Name Residence       ■ VI.NERVOUS SYS.& SENSE ORGANS       \$2,996,368.00       \$771,472.00       \$649,224.00       \$559,549.00       \$433,116.00       \$283,007.00         Day of Week       ■ VII.DIS OF CIRCULATORY SYS       \$24,862,668.00       \$5,375,673.00       \$5,352,234.00       \$4,547,552.00       \$3,948,260.00         Diag Proc Grouping       ■ VII.DIS OF THE RESP.SYS       \$15,731,045.00       \$4,152,420.00       \$3,760,926.00       \$2,2445,746.00       \$2,078,252.00         B VII.DIS OF THE DIGESTIVE SYS       \$10,541,339.00       \$2,725,255.00       \$2,2445,746.00       \$2,078,252.00         B XIL DIS OF GENITOURINARY SYS       \$10,601,590.00       \$2,151,740.00       \$2,068,462.00       \$1,801,657.00       \$2,066,285.00         B XIL DIS OF SKIN/SUBCUT.TISSUE       \$1,783,796.00       \$518,030.00       \$428,360.00       \$347,418.00       \$237,968.00       \$252,020.00         B XIL ONGENITAL ANOMALIES       \$4,4695.00       \$5,664.00       \$13,874.00       \$64,700       \$7,317.00       \$1,619,190.00         B XVI CONGENITAL ANOMALIES       \$44,4695.00       \$5,662.00       \$13,874.00       \$6,847.00       \$7,317.00       \$1,791.00       \$2,563,268.00       \$2,790,900       \$5,78,70,00       \$5,747,67,766.00       \$7,009,963.0         WIL CONCORENITAL ANOMALIES       \$2,748,00       \$2,602.0   | County Name Residence   | U.MENTAL DISORDERS              | \$3,756,903.00                          | \$909,213.00    | \$771,136.00                            | \$819,818.00    | \$642,637.00                            | \$614,099.00    |                |  |
| Day of Week       □       WILDIS OF CIRCULATORY SYS       \$24,862,668.00       \$5,375,673.00       \$5,352,234.00       \$5,638,949.00       \$4,547,552.00       \$3,948,260.00         Diag Proc Grouping       □       WIILDIS OF THE RESP.SYS.       \$15,731,045.00       \$4,152,420.00       \$3,760,926.00       \$3,293,701.00       \$2,445,746.00       \$2,078,252.00         Disposition       □       WIILDIS OF THE DIGESTIVE SYS       \$10,541,339.00       \$2,225,255.00       \$2,424,044.00       \$2,187,113.00       \$1,710,405.00       \$1,494,522.00         B XLDIS OF GENITOURINARY SYS       \$10,601,590.00       \$2,2151,740.00       \$2,068,462.00       \$11,801,567.00       \$2,266,285.00         B XILDIS OF SKIN/SUBCULTITISSUE       \$1,783,796.00       \$518,030.00       \$428,360.00       \$347,418.00       \$237,968.00       \$2252,020.00         B XILDIS OF SKIN/SUBCULTITISSUE       \$4,4695.00       \$5,664.00       \$13,874.00       \$2,688,470.00       \$1,619,190.00         WILLON OF Stay       □       □       \$2,748,20       \$1,699,90.00       \$2,280,871.00       \$1,689,90.00       \$2,280,871.00       \$1,619,910.00       \$2,682,00       \$2,280,871.00       \$1,619,910.00       \$2,602,00       \$13,874.00       \$2,280,871.00       \$1,619,910.00       \$2,602,00       \$1,619,910.00       \$2,74,76,766.00       \$7,009,963.0 <td>Councy Name Residence</td> <td></td> <td>\$2,696,368.00</td> <td>\$771,472.00</td> <td>\$649,224.00</td> <td>\$559,549.00</td> <td>\$433,116.00</td> <td>\$283,007.00</td> <td></td>   | Councy Name Residence   |                                 | \$2,696,368.00                          | \$771,472.00    | \$649,224.00                            | \$559,549.00    | \$433,116.00                            | \$283,007.00    |                |  |
| Diag Proc Grouping       □ VIII.DIS OF THE RESP.SYS.       \$15,731,045.00       \$4,152,420.00       \$3,760,926.00       \$3,293,701.00       \$2,445,746.00       \$2,078,252.00         Disposition       □ N.DIS OF THE DIGESTIVE SYS       \$10,511,339.00       \$2,725,255.00       \$2,424,044.00       \$2,187,113.00       \$1,710,405.00       \$1,494,522.00         □ M.DIS OF GENITOURINARY SYS       \$10,601,590.00       \$2,2151,740.00       \$2,068,462.00       \$1,801,567.00       \$2,066,285.00         □ M.DIS OF SKIN/SUBCUT.TISSUE       \$1,783,796.00       \$2518,030.00       \$428,360.00       \$347,418.00       \$237,968.00       \$252,020.00         □ MILDIS OF SKIN/SUBCUT.TISSUE       \$1,783,796.00       \$51,803.00       \$428,360.00       \$34,718.00       \$27,317.00       \$10,993.00         □ Length of Stay       □ MUSCULOSKELETAL/CONN.TI.       \$11,155,152.00       \$5,664.00       \$13,874.00       \$6,847.00       \$7,317.00       \$10,993.00         □ W.U.CONGENITAL ANOMALIES       \$44,695.00       \$5,664.00       \$7,476,766.00       \$7,109,993.00       \$7,009,963.0         □ M.CHS Groupings       □ M.C.C.POIS & VIOL(EXT.CAUSE)       \$2,748.00       \$2,602.00       \$146.00       \$215,470.00       \$231,351.00         Payor Primary Expected       All Race       \$1,310,744.00       \$286,392.00       \$280,966.00   | Day of Week   | ■ VII.DIS OF CIRCULATORY SYS    | \$24,862,668.00                         | \$5,375,673.00  | \$5,352,234.00                          | \$5,638,949.00  | \$4,547,552.00                          | \$3,948,260.00  |                |  |
| Disposition       □       □       IX.DIS OF THE DIGESTIVE SYS       \$10,541,339.00       \$2,725,255.00       \$2,424,044.00       \$2,187,113.00       \$1,710,405.00       \$1,494,522.00         Obsposition       □       X.DIS OF GENITOURINARY SYS       \$10,601,590.00       \$2,513,536.00       \$2,151,740.00       \$2,068,462.00       \$1,801,567.00       \$2,066,285.00         Operative Groupings       □       X.DIS OF SKIN/SUBCUT.TISSUE       \$1,783,796.00       \$518,030.00       \$428,360.00       \$347,418.00       \$237,968.00       \$252,020.00         □       XIII.MUSCULOSKELETAL/CONN.TI.       \$11,155,152.00       \$2,821,017.00       \$2,653,268.00       \$2,737,080.00       \$1,870,806.00       \$1,870,806.00       \$1,619,190.00         □       XIV.CONGENITAL ANOMALIES       \$44,695.00       \$5,664.00       \$13,874.00       \$6,847.00       \$7,317.00       \$10,993.00         □       XVII.ACCIDENTS/POISON/VIOLENCE       \$34,451,913.00       \$7,476,766.00       \$7,009,963.0         □       WK UPECASED       \$2,748.00       \$2,602.00       \$146.00       \$215,470.00       \$231,351.00         NCHS Groupings       □       200 COT OF RANGE       \$1,310,744.00       \$286,392.00       \$280,966.00       \$296,565.00       \$215,470.00       \$231,351.00       \$231,351.00  | Diag Proc Grouping  | ■ VIII.DIS OF THE RESP.SYS.     | \$15,731,045.00                         | \$4,152,420.00  | \$3,760,926.00                          | \$3,293,701.00  | \$2,445,746.00                          | \$2,078,252.00  |                |  |
| Disposition   | Disposition   | ■ IX.DIS OF THE DIGESTIVE SYS   | \$10,541,339.00                         | \$2,725,255.00  | \$2,424,044.00                          | \$2,187,113.00  | \$1,710,405.00                          | \$1,494,522.00  |                |  |
| Gender  | Disposition   | ■ X.DIS OF GENITOURINARY SYS    | \$10,601,590.00                         | \$2,513,536.00  | \$2,151,740.00                          | \$2,068,462.00  | \$1,801,567.00                          | \$2,066,285.00  |                |  |
| Procedure Groupings <sup>III</sup> XIII.MUSCULOSKELETAL/CONN.TI. <sup>\$11,155,152.00</sup> <sup>\$2,821,017.00</sup> <sup>\$2,563,268.00</sup> <sup>\$2,280,871.00</sup> <sup>\$1,870,806.00</sup> <sup>\$1,619,190.00</sup> <sup>III</sup> XIV.CONGENITAL ANOMALIES <sup>\$44,695.00</sup> <sup>\$5,664.00</sup> <sup>\$13,874.00</sup> <sup>\$6,847.00</sup> <sup>\$7,317.00</sup> <sup>\$10,993.00</sup> <sup>III</sup> XVI.CONGENITAL ANOMALIES <sup>\$44,695.00</sup> <sup>\$5,664.00</sup> <sup>\$13,874.00</sup> <sup>\$6,847.00</sup> <sup>\$7,317.00</sup> <sup>\$10,993.00</sup> <sup>III</sup> XVI.CONGENITAL ANOMALIES <sup>\$44,695.00</sup> <sup>\$5,764.794.00</sup> <sup>III,236.631.00</sup> <sup>IIII,236.631.00</sup> <sup>III,236.631.00</sup> | Gender  | ■ XII.DIS OF SKIN/SUBCUT.TISSUE | \$1,783,796.00                          | \$518,030.00    | \$428,360.00                            | \$347,418.00    | \$237,968.00                            | \$252,020.00    |                |  |
| Length of Stay       Image: Constraint an ADMALIES       \$44,695.00       \$5,664.00       \$13,874.00       \$6,847.00       \$7,317.00       \$10,993.00         Image: Constraint and the state of the   | Procedure Groupings   |                                 | \$11,155,152.00                         | \$2,821,017.00  | \$2,563,268.00                          | \$2,280,871.00  | \$1,870,806.00                          | \$1,619,190.00  |                |  |
| Engline of stay       El xvL cymptons/ILL DEFINED COND.       105 776 599.00       15 296 691.00       113 617 622.00       111 692 639.00       15 776 659.00         W NUL COLORAND       \$34,451,913.00       \$7,476,766.00       \$7,009,963.0         NCHS Groupings   | Length of Stay  | TIV.CONGENITAL ANOMALIES        | \$44,695.00                             | \$5,664.00      | \$13,874.00                             | \$6,847.00      | \$7,317.00                              | \$10,993.00     |                |  |
| Image: NCHS Groupings       Image: NCHS Groupings <th group<="" image:="" nchs="" td=""><td></td><td>L+LXVI.SYMPTOMS/ILL-DEFINED COND.</td><td>\$65,778,539.00</td><td>\$15,994,794.00</td><td>\$15,236,831.00</td><td>\$13,817,622.00</td><td>\$10,992,633.00</td><td>\$9,736,659.00</td><td></td></th>  | <td></td> <td>L+LXVI.SYMPTOMS/ILL-DEFINED COND.</td> <td>\$65,778,539.00</td> <td>\$15,994,794.00</td> <td>\$15,236,831.00</td> <td>\$13,817,622.00</td> <td>\$10,992,633.00</td> <td>\$9,736,659.00</td> <td></td> |                                 | L+LXVI.SYMPTOMS/ILL-DEFINED COND.       | \$65,778,539.00 | \$15,994,794.00                         | \$15,236,831.00 | \$13,817,622.00                         | \$10,992,633.00 | \$9,736,659.00 |  |
| WCHS Groupings         ■ XX.ACC,POIS & VIOL(EXT.CAUSE)         \$2,748.00         \$2,602.00         \$146.00         ■           Payor Primary Expected         All Race         \$1,310,744.00         \$286,392.00         \$296,565.00         \$215,470.00         \$231,351.00  | H XVII.ACCIDENTS  | 6/POISON/VIOLENCE               | \$34,4                                  | 51,913.00       | \$7,4                                   | 176,766.0       | )0 \$7                                  | ,009,963        | .00            |  |
| NCHS Groupings         CODE OUT OF RANGE         \$1,310,744.00         \$286,392.00         \$296,565.00         \$215,470.00         \$231,351.00           All Race         Region Residence         The second seco  | VK Deceased   | XX.ACC,POIS & VIOL(EXT.CAUSE)   | \$2,748.00                              | \$2,602,00      | \$146.00                                |                 |   |                 |                |  |
| Payor Primary Expected     All Race       Region Residence  | NCHS Groupings  | CODE OUT OF RANGE               | \$1,310,744.00                          | \$286,392.00    | \$280,966.00                            | \$296,565.00    | \$215,470.00                            | \$231,351,00    |                |  |
| All Race Region Residence   | Payor Primary Expected  |                                 | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | .,,             | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | ,,              | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                 |                |  |
| Region Residence  | All Pace  |                                 |   |                 |   |                 |   |                 |                |  |
| Region Residence  | Air Nace  |                                 |   |                 |   |                 |   |                 |                |  |
|   | Region Residence  |                                 |   |                 |   |                 |   |                 |                |  |
| Emergency Room  | Emergency Room  |                                 |   |                 |   |                 |   |                 |                |  |
| □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□  | 👊 🖪 🕿 lit 🛄 🖷 🐝 🖍   | v 🖹 🖻 🎒 🖓                       |   |                 |   |                 |   | ③ III 6 Ξ       | 19             |  |

#### Replacing diagnoses with primary payor expected, we can see the distribution of charges

| Charges by Age over Payor Primary Expected for 2003, Emergency Room |   |   |                           |                  |                 |                    |                 |                    |                 |  |
|---|---|---|---------------------------|------------------|-----------------|--------------------|-----------------|--------------------|-----------------|--|
| Slicers   | ;   | × |                           |                  |                 |                    |                 |                    |                 |  |
| Si  | cers ## Charges   |   |                           | All Age          | 45-49 🗄         | 50-54 <sup>±</sup> | 55-59 🖽         | 60-64 <sup>±</sup> | 65-69 🖽         | 70-74 🖽                                      |
|   | 2003 Per Patri  | A | II Payor Primary Expected | \$459,128,691.00 | \$55,751,492.00 | \$80,783,057.00    | \$66,062,760.00 | \$62,673,080.00    | \$45,904,475.00 | \$43,033,135.00                              |
|   | Charges   |   | Commercial                | \$133,760,012.00 | \$26,576,708.00 | \$40,104,203.00    | \$33,089,793.00 | \$23,559,734.00    | \$5,412,993.00  | \$2,175,093.00                               |
|   | Count Visita ER Voor  |   | 1edicare                  | \$230,629,267.00 | \$7,325,825.00  | \$13,382,675.00    | \$14,598,202.00 | \$17,171,305.00    | \$37,710,781.00 | \$39,825,009.00                              |
|   | Count Visits EK rear  |   | Relfory                   | \$30,946,332.00  | \$6,442,009.00  | \$8,956,559.00     | \$7,350,829.00  | \$6,155,811.00     | \$1,307,577.00  | \$334,552.00                                 |
|   | Count Visits IP Year  |   | lot Stated                | \$2,775,001,00   | \$14,/11,228.00 | \$17,405,420.00    | \$10,426,281.00 | \$15,328,331.00    | \$1,409,694.00  | \$083,225.00                                 |
| 5.00E7<br>4.00E7<br>3.00E7<br>2.00E7                                | Count Visits OP Yi ar<br>Count Visits IPER & ar<br>ounty Name Residence<br>Diag Proc Groupi<br>Disposition<br>Gender<br>Concedure Groupi<br>Length of Stay<br>MDC DRG | 4 |                           |                  |                 |                    |                 |                    |                 | Commercia<br>Medicare<br>Medicaid<br>Selfpay |
| 1.00E7  |   |   |                           |                  |                 |                    | 75.70           |                    | 86 4            | ■Not Stated<br>© III 10 = 6                  |

## Analytic Cubes have been created for:

- Injuries
- Behavioral Health
- Medicaid
- Seniors awarded recognition from the national Administration on Aging
- Dental Services
- Mother Baby

### For More Information

Diana M Tester – 803-898-9962 <u>Diana.Tester@ors.sc.gov</u>

Walter "Pete" Bailey – 803-898-9941 <u>Pete.Bailey@ors.sc.gov</u>

David Patterson – 803-898-9954 David.Patterson@ors.sc.gov

### **Extra Slides**

### Software

- Fact tables created in SAS
- Loaded into Microsoft SQL Server
- Cube Created Using "Analysis Services" (a tool in SQL Server)
- Retrieval from Cube and Web Interface Using "Panorama" (Nova View)
- Secure Web Access Using User and Work Station Certificates

Example of Existing Cube: Linked Mother/Baby

Linked data sets for

 Hospital delivery record of mother
 Hospital birth record of infant
 All pre-natal hospitalizations and ED visits of the mother

# Example of Existing Cube (continued)

All Medicaid claims for the mother during the pre-natal period
Vital Record birth/infant death certificate
Sub-population indicators for Food Stamp and TANF participants

| <u>F</u> ile   | <u>E</u> dit <u>V</u> iew F <u>a</u> vorite | s   | <u>T</u> ools <u>H</u> elp |                                 |                  |                 |                 | 2              |
|----------------|---|-----|----------------------------|---------------------------------|------------------|-----------------|-----------------|----------------|
| 0              | Back 🔹 🕥 🐇 🔀                                |     | 🗿 🏠 🔎 Search 🦻             | 🛧 Favorites 🕢 🔗 💊 👔             | - 📙 🏭 🦓          |                 |                 | ><br>Links     |
| A <u>d</u> dre | ss 🕘 https://www.ors                        | dwh | wb.state.sc.us/panorama/CO | NNECTOR.dll?                    |                  |                 |                 | 💌 🄁 Go         |
| <u>_</u>       |   |     |                            | Percentage of Births by         | Race over Birth  | n Outcome       |                 |                |
| Slic           | cers  | x   |                            |                                 |                  |                 |                 |                |
|                | ## Births                                   |     |                            |                                 |                  |                 |                 |                |
|                | Age of Mother                               | i   |                            |                                 |                  |                 |                 |                |
|                | by Birth Outcome                            | i   |                            |                                 |                  |                 |                 |                |
|                |   |     |                            |                                 |                  |                 |                 |                |
| <u> </u>       | aby Date of Birth                           |     |                            |                                 |                  |                 |                 |                |
| Bał            | by Health Condit                            |     |                            |                                 |                  |                 | African         |                |
| Bi             | rth Weight Group                            |     |                            |                                 | All Race         | White           | American        | Hispanic       |
| В              | Body Mass Index                             |     | All Birth Outcome          |                                 | [158,105] 100.%  | [90,415] 100.%  | [53,959] 100.%  | [8,310] 100.%  |
|                | unties Individually                         |     | Healthy                    |                                 | [110,157] 69.67% | [65,873] 72.86% | [35,491] 65.77% | [6,106] 73.48% |
|                | unces manadally                             |     | Other Problem              |                                 | [20,448] 12.93%  | [11,590] 12.82% | [7,145] 13.24%  | [1,117] 13.44% |
|                | DHEC Districts                              |     | Significant Problem 🖻      | Significant Problem             | [23,169] 14.65%  | [10,190] 11.27% | [10,152] 18.81% | [847] 10.19%   |
| Ed             | lucation of Mother                          |     |                            | Died                            | [1,290] 5.57%    | [479] 4.7%      | [756] 7.45%     | [39] 4.6%      |
|                | a a stand Davy Caurea                       |     |                            | Full Term with Chronic Problems | [7,458] 32.19%   | [4,162] 40.84%  | [2,807] 27.65%  | [315] 37.19%   |
| Ext            | becteu Pay Source                           |     |                            | Low Birth Weight                | [12,192] 52.62%  | [4,819] 47.29%  | [5,493] 54.11%  | [438] 51.71%   |
| Foc            | od Stamp Particip                           |     |                            | Very Low Birth Weight           | [2,229] 9.62%    | [730] 7.16%     | [1,096] 10.8%   | [55] 6.49%     |
| All            | Interpregnancy                              |     | Unknown                    | <u>ل</u>                        | [4,331] 2.74%    | [2,762] 3.05%   | [1,171] 2.17%   | [240] 2.89%    |
| Ke«            | ssner Adequacy                              |     |                            |                                 |                  |                 |                 |                |
|                |   |     |                            |                                 |                  |                 |                 |                |
|                | ethod of Delivery                           |     |                            |                                 |                  |                 |                 |                |
| Mo             | other Risks Found                           |     |                            |                                 |                  |                 |                 |                |
|                | Multiple Birth                              |     |                            |                                 |                  |                 |                 |                |
| Pł             | nysician Specialty                          |     |                            |                                 |                  |                 |                 |                |
|                | TANE  | -   | •                          |                                 |                  |                 |                 | •              |

#### Percentage of Births by Race over Birth Outcome for Adequate

|                       | All Race        | White           | African<br>American |
|-----------------------|-----------------|-----------------|---------------------|
| All Birth Outcome     | [109,929] 100.% | [69,739] 100.%  | [32,169] 100.%      |
| Healthy 🖽             | [78,107] 71.05% | [51,485] 73.83% | [21,618] 67.2%      |
| Other Problem 🛛 🖽     | [14,089] 12.82% | [8,884] 12.74%  | [4,198] 13.05%      |
| Significant Problem 🕀 | [14,614] 13.29% | [7,193] 10.31%  | [5,649] 17.56%      |
| Unknown 🖽             | [3,119] 2.84%   | [2,177] 3.12%   | [704] 2.19%         |

Percentage of Births by Race over Birth Outcome for Adequate, No Risks Identified

|                       | All Race       | White           | African<br>American |
|-----------------------|----------------|-----------------|---------------------|
| All Birth Outcome     | [39,616] 100.% | [29,223] 100.%  | [7,485] 100.%       |
| Healthy 🖽             | [30,822] 77.8% | [22,948] 78.53% | [5,594] 74.74%      |
| Other Problem 🛛 🖽     | [4,159] 10.5%  | [3,049] 10.43%  | [805] 10.75%        |
| Significant Problem 🗄 | [2,504] 6.32%  | [1,620] 5.54%   | [724] 9.67%         |
| Unknown 🖽             | [2,131] 5.38%  | [1,606] 5.5%    | [362] 4.84%         |

Percentage of Births by Race over Birth Outcome for College, Adequate, No Risks Identified

|                       | All Race       | White          | African<br>American |
|-----------------------|----------------|----------------|---------------------|
| All Birth Outcome     | [14,234] 100.% | [12,115] 100.% | [1,508] 100.%       |
| Healthy 🖽             | [11,287] 79.3% | [9,671] 79.83% | [1,141] 75.66%      |
| Other Problem 🛛 🖽     | [1,558] 10.95% | [1,321] 10.9%  | [167] 11.07%        |
| Significant Problem 🗄 | [792] 5.56%    | [617] 5.09%    | [134] 8.89%         |
| Unknown 🖽             | [597] 4.19%    | [506] 4.18%    | [66] 4.38%          |