

West Virginia Birth Score Program

Developmental Risk and Newborn Hearing Screen Initiative



2011 Annual Report

Submitted: February 2012

This program is funded under an agreement with the West Virginia Department of Health and Human Resources, Bureau for Public Health, Office of Maternal, Child and Family Health

Annual Report Contents

Section I: Program Priorities

- A. Maintain the integrity of the newborn risk screening process at the hospital level
- B. Assure timely at-risk infant referrals to appropriate OMCFH sites and maintain a system of collaborative dialogue between our program and our referral systems to maximize service delivery and program efficiency.
- C. Maintain the integrity of the Birth Score database, assure timely data processing and apply appropriate analytical and query procedures to assure valid reporting.
- D. Participate in meetings, professional conferences, etc. that are affiliated with the Birth Score program activities and goals.
- E. Collaborate with other agencies/professional groups/organizations to explore the Birth Score/Birth Certificate data to assess the health of pregnant women and infants, and ultimately identify priority areas.

Section II. Analysis of 2011 Birth Score Form Data: Distribution of Birth Scores (High/Low)

- A. Medicaid
- B. Payment Method
- C. Tobacco Use
- D. Maternal Age
- E. Maternal Education
- F. Feeding Intention
- G. Birth Weight
- H. Maternal Stress
- I. Maternal Self-Perceived Health
- J. Maternal Diabetes
- K. Developmental
- L. Hearing

Section III: 2011 Annual Program Highlights/2012 Goals

Section I: Program Priorities

A. Maintain the integrity of the newborn risk screening process at the hospital level

Key Activities:

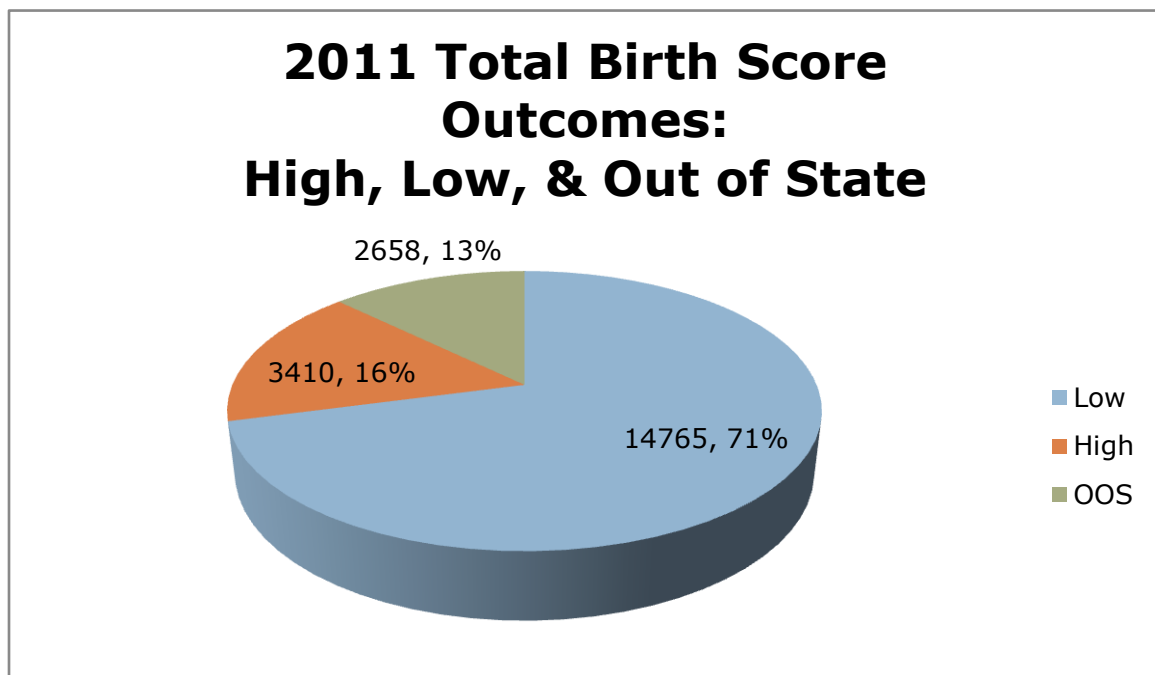
- Communicate regularly with 32 Birthing Sites to maintain relationships and update Birthing Site contact information.
 - Utilized hospital contact list-serve to communicate issues, questions, and requested information related to Birth Score Program.
- Identify Birth Score Form training issues/concerns and conduct site visits per requests from hospital staff.
- Provide hospitals with data specific to their birth units (i.e. number of infants scored, number of score cards with missing information, etc.) that will assist in maintaining and improving the overall scoring process
 - 1/21/11- Mailed out 2009-2010 Annual Hospital Report (See *Appendix A for sample*)
- The following table summarizes the hospital supply requests that were fulfilled in CY 2011 by the Birth Score office.

Hospital	Score Cards	Large Mailers	Small Mailers	Q&A Birth Score Brochures	Q&A EI Brochures	RFTS Hospital Brochures	NICU Referral Forms
2011 Totals	20,500	1,335	2,840	870	210	90	400

B. Assure timely at-risk infant referrals to appropriate OMCFH sites and maintain a system of collaborative dialogue between our program and our referral systems to maximize service delivery and program efficiency.

Key Activities:

- Birth Score forms are checked for missing information and errors, scanned, and automatically uploaded into the Birth Score database. Computer generated referral forms on infants at risk are emailed to RFTS for care coordination and Newborn Hearing follow-up, Health Check, and mailed to Birth To Three and physicians (PCP) to advise them of the risk status. These forms are emailed, faxed, or mailed to the appropriate site/s within 24 hours, or one working day, of receipt in the Birth Score office.
- 20,833 infants were scored at 32 Birth Hospitals in 2011. See *Appendix B* for hospital totals.
- The following chart illustrates the infant referrals processed/reported during the CY 2011.



C. Maintain the integrity of the Birth Score database, assure timely data processing and apply appropriate analytical and query procedures to assure valid reporting.

Key Activities:

- Birth Score staff members complete many routine tasks related to the Birth Score database, see below:
 - Receive electronic file from Vital Statistics monthly that includes birth certificate data for WV infants. The file is merged with the Birth Score data to identify infants who were not scored.
 - On a daily basis, provide data file of all RFTS High Birth Score/NICU referrals and Newborn Hearing referrals to OMCFH to upload the infants into the RFTS EDS.

D. Participate in meetings, professional conferences, etc. that are affiliated with the Birth Score program activities and goals.

Key Activities:

- Attended monthly RFTS RCC meetings :
 - 2/2/11: Charleston, WV (C. Hamilton)
 - 3/2/11: Conference Call (C. Hamilton)
 - 6/1/11: Charleston, WV (C. Hamilton, C. Britton)
 - 7/13/11: Conference call (C. Hamilton)
 - 8/3/11: Charleston, WV (C. Hamilton)
 - 9/7/11: Charleston, WV (C. Hamilton)
 - 12/7/11: Charleston, WV (C. Hamilton, C. Britton)
- Attended HAPI Project Staff meetings as needed/requested:
 - 3/14/11: HAPI Office (C. Hamilton, C. Britton, P. Womeldorff)
 - 10/18/11: Birth Score Office (C. Hamilton, P. Womeldorff)
- Attended Women's Health Conference: It's All About You
 - 5/10/11-5/12/11: Charleston, WV (C. Hamilton, C. Britton)
- Attended meetings with OMCFH staff as needed
 - 1/10/11: Conference Call (C. Hamilton, C. Britton, M. Richardson)
 - 2/2/11: Charleston, WV (C. Hamilton, K. Cummons, M. Baker)
 - 3/8/11: Conference Call (C. Hamilton, M. Preston)

- 5/23/11: Conference Call (C. Hamilton, C. Britton)
 - 7/15/11: Conference call (C. Hamilton, C. Britton, S. Thorn, M. Richardson)
 - 8/19/11: Conference Call (C. Hamilton, D. Smith)
 - 9/8/11: WVU Healthcare, Physician's Office Center (C. Hamilton, C. Britton, M. Mullett, C. Atha)
 - 10/3/11: Conference Call (C. Hamilton, C. Britton, J. Newson)
 - 10/3/11: Conference Call (C. Hamilton, S. Thorn)
 - 11/7/11: Conference Call (C. Hamilton, C. Britton)
 - 11/30/11: Conference Call (C. Hamilton, C. Britton, D. Smith, J. Clark, D. Young)
- Attend National Children's Study: Community Advisory Team Meetings
 - 2/4/11: Fairmont General Hospital (C. Hamilton)
 - 8/5/11: Fairmont General Hospital (C. Hamilton)
 - 9/27/11: HSC, Morgantown, WV (C. Hamilton)
 - 11/4/11: Fairmont General Hospital (C. Hamilton)
 - Attended Newborn Day Conference
 - 4/8/11: Charleston, WV (C. Hamilton, C. Britton, M. Mullett)

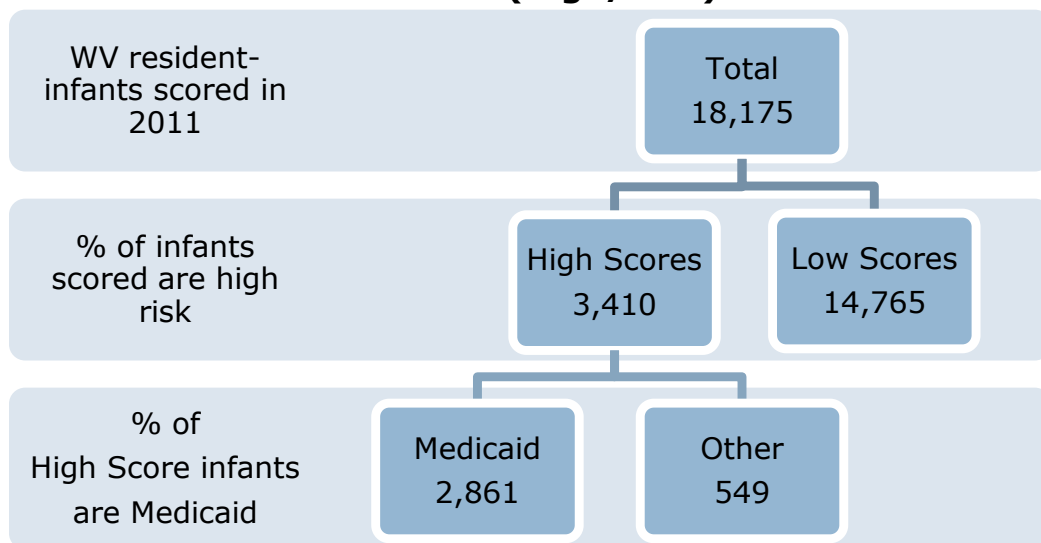
E. Collaborate with other agencies/professional groups/organizations to explore the Birth Score/Birth Certificate data to assess the health of pregnant women and infants, and ultimately identify priority areas.

Key Activities:

- Provided state and county level data requested by the HAPI project for grant renewal application.
- Provided birth score data requested by WV Partners in Community Outreach (Nancy Toliver).
- Matched HAPI enrolled prenatal women who received oral health services to their infants' data (birth score/birth certificate) to identify birth weight and gestational age. Provided "HAPI: Oral Health Enrollment/Services Report" quarterly evaluation report
- Provided several WVU faculty members with unique de-identified data files to be used for the purpose of grant writing.
- Provided data to OMC FH staff as requested.

Section II. Analysis of 2011 WV Resident Birth Score Data

A. Distribution of Birth Scores (High/Low) and Medicaid

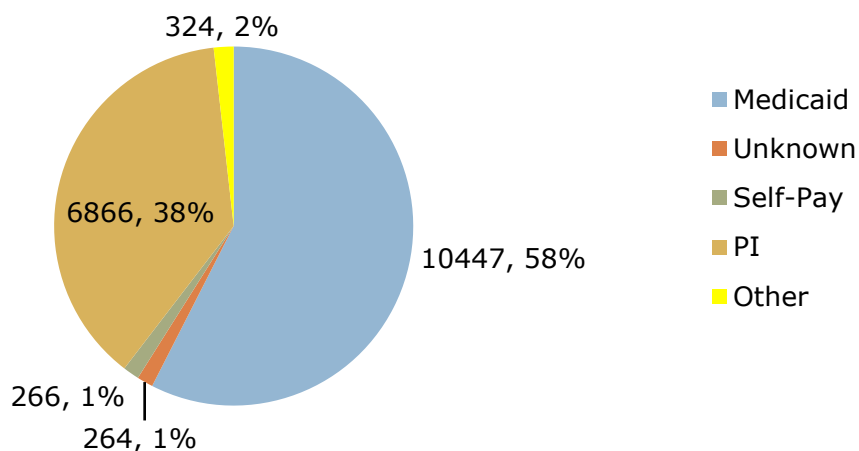


B. Distribution of Birth Scores (High/Low) and Payment Method

	Other	Private Insurance	Self-pay	Unknown	Medicaid
High Score	36	453	42	18	2,861
Low Score	296	6,413	224	246	7,586
Totals	332	6,866	266	264	10,447

- 57% of the WV resident births were Medicaid
- 84% of the High Score infants were Medicaid

2011 Total Birth Score & Payment Method



- 58% of the infants scored in 2011 were Medicaid

C. Distribution of Birth Scores (High/Low) and Tobacco Use among Mother's

	Tobacco Use	No Tobacco Use
High Score	1,957	1,453
Low Score	3,563	11,202
Total	5,520	12,655

- 57% of the High Score infant mother's report using tobacco
- Overall, 30% of the scored infants mother's reporting using tobacco

D. Distribution of Birth Scores (High/Low) and Maternal Age

	>19	17-19	<17
High Score	1,782	1,381	247
Low Score	14,265	468	32
Total	16,047	1,849	279

- 48% of High Score infant mother's are 19 years old or younger

E. Distribution of Birth Scores (High/Low) and Maternal Education

	Above 10th grade	10th grade or lower
High Score	2,233	1,177
Low Score	13,866	899
Total	16,099	2,076

- 35% of High Score infant mother's have a 10th grade education or lower

F. Distribution of Birth Scores (High/Low) and Feeding Intention

	Intend to breastfeed	Intend to bottle - feed
High Score	736	2,674
Low Score	8,437	6,328
Total	9,173	9,002

- Only 22% of High Score infant mother's intend to breastfeed compared to 57% of Low Score infant mother's

G. Distribution of Birth Scores (High/Low) and Birth Weight (grams)

	<1501	1501-2000	2001-2500	2501-3000	>3000
High Score	214	251	666	876	1,403
Low Score	1	47	378	2,864	11,475
Total	215	298	1,044	3,740	12,860

- There are significantly more High Score (1131) infants with low birth weight under 2500 grams when compared to the Low Score infants (426).

H. Distribution of Birth Scores (High/Low) and Mother's Stress

	Not At All	Moderate	Very Stressed	Unknown
High Score	1,601	1,427	220	162
Low Score	8,252	5,487	581	445
Total	9,853	6,914	801	607

- Only 4% of mother's reported being very stressed

I. Distribution of Birth Scores (High/Low) and Mother's Self-Perceived Overall Health

	Poor	Fair	Good	Excellent	Unknown
High Score	14	345	2,124	777	150
Low Score	24	728	8,420	5,138	455
Total	38	1,073	10,544	5,915	605

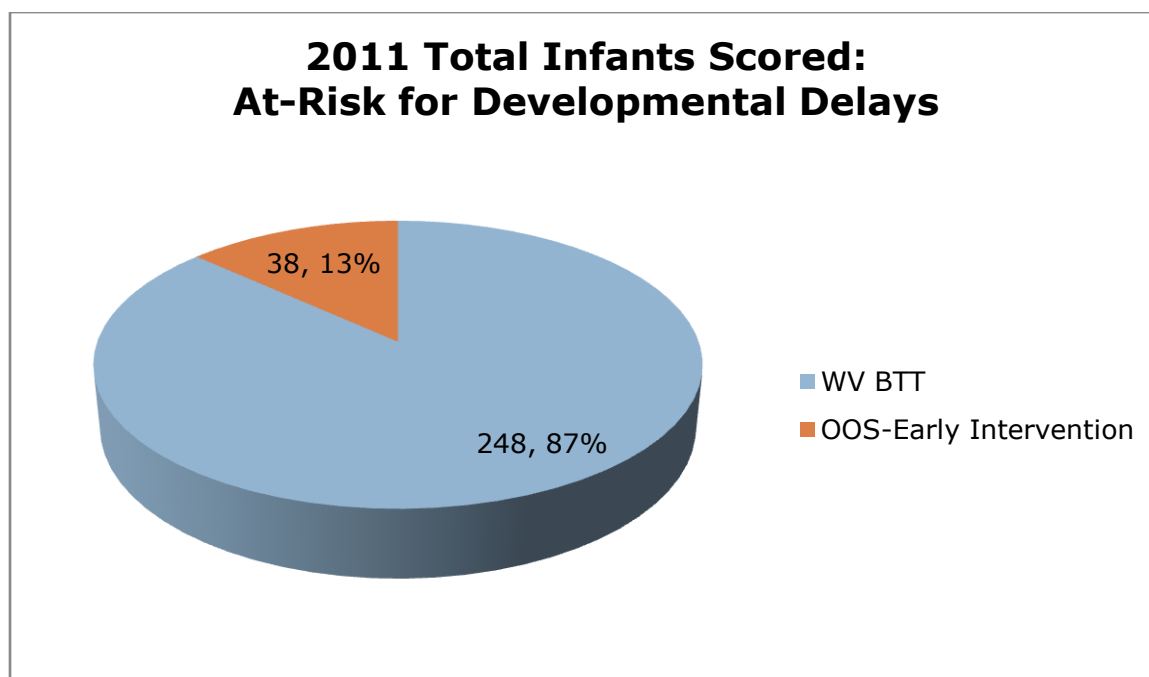
- 58% of mother's perceive their overall health to be "Good"

J. Distribution of Birth Scores (High/Low) and Mother's Diabetes Diagnosis by a Health Professional

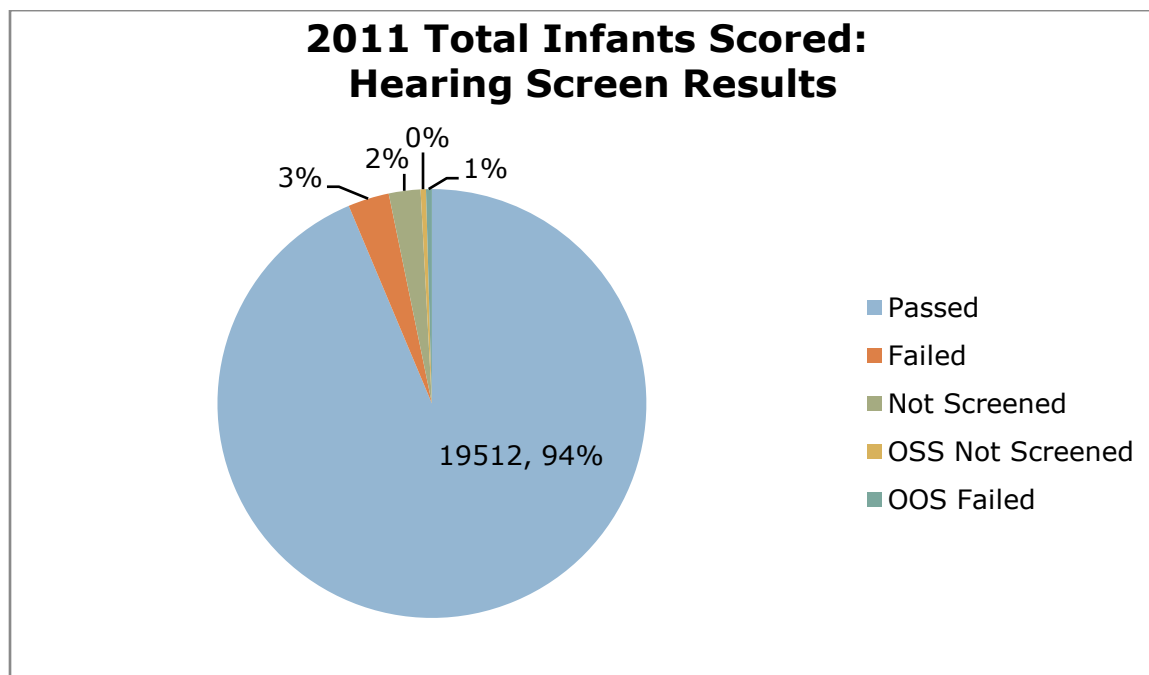
	Never	Gestational	Type I	Type II	Unknown
High Score	3002	148	14	26	220
Low Score	12,838	1109	56	128	634
Total	15,840	1,257	70	154	854

- 7% of mother's reported that they were diagnosed with gestational diabetes

K. Developmental Delays (Among All Infants Scored)



- 286 (1%) infants scored were at-risk for developmental delay
- 13% of those at-risk for developmental delay were out of state residents

L. Hearing Screening Results (Among All Infants Scored)

- 94% of infants passed the newborn hearing screen
- 3% of infants failed the newborn hearing screen, and 2% were not screened
- 176 out of state residents born in WV either failed or were not screened

Section III: 2011 Annual Program Highlights/2012 Goals

2011 Annual Program Highlights

- Data Sharing
 - During 2011 the Birth Score Program began emailing daily files to OMCFH including all High Birth Score and Hearing Screen referrals. The files are uploaded into the RFTS database on a daily basis.
- New database (Birth Score Web Application via SOLE) implemented
 - In May (5/25/11), 2011 a web-based interface (SOLE) that enables files to be transferred from Teleform to the Birth Score database went live.
- Data Ladder Software
 - The Birth Score Program purchased Data Ladder software this year. The data cleansing and deduplication software is easy to use and very affordable. We are able to clean, parse, profile, match, and deduplicate data in record time.
- New Secure Email Delivery System
 - To ensure that all PHI/identifiable data is delivered securely the Birth Score Program began utilizing WVU's secure email system. All agencies that receive referrals from the Birth Score Program have user names and passwords to access files.
- New Initiatives with Birth Hospitals
 - 2009-2010 Birth Hospital Data Report
 - In January, 2011 we provided each Birth Hospital with their data collected on Birth Score Form and state averages.
- Electronic files
 - In addition to the web-based database and electronic referral system, we have discontinued keeping hard copies of the completed Birth Score Forms. Scanned images are available to staff and are stored securely on the Birth Score network drive.

2012 Program Goals:

- In collaboration with OMCFH staff, complete and distribute a Descriptive Analysis report for 2010 RFTS client data.
- Distribute 2011 Hospital Data report to each hospital.
- As of March 1, 2012, the Birth Score Program will complete follow-up/tracking responsibilities for all Medicaid-eligible High Birth Score/NICU infants and all WV infants who either failed or were not screened for hearing. Referrals from the Birth Score Program will continue to be distributed.
 - Database and Form changes will be ongoing, revisions to the Birth Score Manual will be distributed to all agencies as they are made.
- The Birth Score Program is in the very premature planning phase of pursuing a pilot study with an electronic application for the Birth Score Form with Ruby Memorial and Mon General. Communication and planning with programmers and hospital staff is ongoing.

Appendix A

Sample Hospital Report (2009-2010 Data)

Princeton Hospital- Birth Score Data

October 2009- September 2010

Total No. of Infants Scored		608	
No. of West Virginia Residents		590	
No. of Out of State Residents		18	
Payment Method			
	Hospital Average	WV State Average	
• Medicaid	55.8%	59.6%	
• Private Insurance	35.7%	36.0%	
• Self-Pay, Unknown, Other	8.5%	4.4%	
Maternal Characteristics			
• Breast Feeding Intention	44.1%	48.0%	
• Nicotine Use	19.7%	27.9%	
• Gestational Diabetes	6.3%	8.3%	
Infant Characteristics			
• % ≤ 37 weeks	27.1%	19.4%	
• % > 4 kg (8 lbs. 13 oz.)	2.0	6.7%	
• Transferred to NICU	10	659	
• Hearing Screen Results			
○ Pass	94.1%	93.2%	
○ Failed	2.8%	3.8%	
○ Not Screened	3.1%	3.0%	

Appendix B

2011 No. of Infants Scored by Birth Hospital

2011 Infants Score by Birth Hospital

APPALACHIAN REGIONAL	85
BLUEFIELD REGIONAL MEDICAL CENTER	603
CABELL HUNTINGTON HOSPITAL	2478
CAMDEN-CLARK HOSPITAL	1324
CITY HOSPITAL	901
DAVIS MEMORIAL HOSPITAL	339
FAIRMONT GENERAL HOSPITAL	434
GARRETT CO. HOSPITAL	277
GRANT MEMORIAL HOSPITAL	221
GREENBRIER VALLEY MED CENTER	583
JEFFERSON MEM HOSPITAL	286
LOGAN GENERAL HOSPITAL	316
MONONGALIA GENERAL HOSPITAL	1002
OHIO VALLEY MED CENTER	263
PLEASANT VALLEY HOSPITAL	207
PRESTON MEMORIAL HOSPITAL	31
PRINCETON COMMUNITY HOSPITAL	620
RALEIGH GENERAL HOSPITAL	1444
REYNOLDS MEMORIAL HOSPITAL	88
RUBY MEMORIAL HOSPITAL	1284
SAINT MARY'S HOSPITAL	426
ST. JOE (BUCKHANNON)	286
ST. JOE (PARKERSBURG)	193
STONEWALL JACKSON HOSPITAL	345
SUMMERSVILLE MEM HOSPITAL	313
THOMAS MEMORIAL HOSPITAL	1000
UNITED HOSPITAL CENTER	897
WEIRTON MEDICAL CENTER	383
WELCH EMERGENCY HOSPITAL	46
WHEELING HOSPITAL	1136
WILLIAMSON MEMORIAL HOSPITAL	102
WOMEN & CHILDREN	2920
GRAND TOTALS	20,833