

2009

Jerome Wilson, Leilani Wilson, Jared Tanner
Wilson v. C. Joseph Glenn, M.D., Steven S
MacArthur, M.D., David H. Broadbent, M.D.m and
IHC Hospitals Inc., Utah Valley Regional Medical
Center : Reply Brief

Utah Supreme Court

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IN THE UTAH SUPREME COURT

JEROME WILSON and LEILANI
WILSON, as Guardians ad Litem for
JARED TANNER WILSON, their minor
child,

Plaintiffs/Appellants and
Cross-Appellees,

vs.

C. JOSEPH GLENN, M.D., STEVEN S.
MacARTHUR, M.D., DAVID H.
BROADBENT, M.D., and IHC
HOSPITALS, INC. dba UTAH VALLEY
REGIONAL MEDICAL CENTER,

Defendant/Appellee and
Cross-Appellant.

**CROSS-APPEAL REPLY BRIEF OF
DEFENDANT-APPELLEE AND
CROSS-APPELLANT
IHC HOSPITALS, INC., dba
UTAH VALLEY REGIONAL
MEDICAL CENTER**

Case No. 20090354

Appeal from the Judgment of the Fourth Judicial District Court
County of Utah
The Honorable Fred D. Howard, District Court Judge, Presiding
District Court Case No. 010404519

**FILED
UTAH APPELLATE COURTS**

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ARGUMENT

I. THE TRIAL COURT ERRED IN ALLOWING DISCOVERY AND ADMISSION OF THE HOSPITAL'S PRIVILEGED NEONATAL MORBIDITY AND MORTALITY STATISTICS.

In its conditional cross-appeal, the Hospital argued that the trial court erred in allowing the Wilsons to discover and introduce the Hospital's neonatal morbidity and mortality statistics because the statistics are privileged under Utah's care review statute, Utah Code Ann. § 26-25-1(1), (3). (Docketing Statement of Cross-Appellant IHC Hospitals, Inc. [IHC Health Services, Inc.] dba Utah Valley Regional Medical Center at 4; Brief of Defendant-Appellee and Cross-Appellant IHC Hospitals, Inc., dba Utah Valley Regional Medical Center ("Hospital's Brief") at 47-48.) Specifically, the Hospital appealed: (1) the trial court's October 30, 2008 ruling requiring the production of the statistics and (2) the court's subsequent admission of the statistics. (*Id.*) With respect to the morbidity and mortality statistics, these two rulings are the only rulings at issue on appeal. (*Id.*)

The Wilsons do not respond to the arguments raised by the Hospital. (*See generally* Reply Brief of Appellants and Brief of Cross-Appellee ("Wilson's Reply Brief") at 22-24.) Instead, without analysis or further explanation, they simply state that the trial court's "ruling finally requiring production was correct and should not be overturned." (*Id.* at 24.) Rather than defend the trial court's ruling, the Wilsons have endeavored to seek new affirmative relief in defense of the Hospital's cross-appeal by contending the care review statute is unconstitutional. As explained below, the Wilsons' argument is procedurally improper. More significantly, the Wilsons have failed to counter the Hospital's arguments for reversing

the trial court's erroneous decisions to require not only production of the privileged morbidity and mortality statistics, but to allow the privileged statistics' admission and extensive use by the Wilsons at trial and in closing argument. (*See, e.g.*, R. 8608, Vol. 6, pp. 1215:18 - 1220:22; R. 8610, Vol. 8, pp. 1476-1505; R. 8621, Vol. 19, pp. 3884:24 - 3885:2.)

A. The Wilsons Do Not Rebut the Hospital's Argument Regarding Application of the Statutory Privilege.

The purpose underlying the protection of care review information is recognized in Utah as it is throughout the country.

The purpose of these statutes is to improve medical care by allowing health-care personnel to reduce 'morbidity or mortality' and to provide information to evaluate and improve 'hospital and health care.' Without the privilege, personnel might be reluctant to give such information, and the accuracy of the information and the effectiveness of the studies would diminish greatly.

Benson ex rel. Benson v. I.H.C. Hosps., Inc., 866 P.2d 537, 539 (Utah 1993);¹ *see also, e.g., Jenkins v. Wu*, 468 N.E.2d 1162, 1168 (Ill. 1984) ("[T]he purpose of this legislation is not to facilitate the prosecution of malpractice cases. Rather, its purpose is to ensure the effectiveness of professional self-evaluation, by members of the medical profession, in the interest of improving the quality of health care.")

Utah courts hold that the privilege applies where the party claiming the privilege has proffered an adequate evidentiary basis establishing that the requested information falls within the aegis of Utah Code Ann. § 26-25-1(1), (3). *See Cannon v. Salt Lake Reg. Med. Ctr.*,

¹ In further recognition of the importance of protecting care review information, the Utah Legislature amended Utah Code Ann. § 26-25-3 in 1994, after the *Benson ex rel. Benson* decision, in order to clarify and strengthen the protections it affords. *See* 1994 Utah Laws Ch. 314 (S.B. 158) (amending statute to make clear that care review materials are privileged and protected from both discovery and use at trial).

Inc., 2005 UT App 352, ¶¶ 12-21, 121 P.3d 74 (holding that trial courts should apply the statutory privilege where a sufficient evidentiary basis exists); *Benson ex rel. Benson*, 866 P.2d at 538.

The Hospital's morbidity and mortality statistics consist of a summary chart indicating by gestational age and by infant weight *inter alia* survival rates, percentage of infants requiring ventilation, required surgeries, neurological outcomes, and lengths of stay in the Newborn Intensive Care Unit, as well as the data underlying the summary chart designated by year. (See Addendum, summary and underlying statistics.)² As Dr. Stoddard testified in deposition, the statistics "often will have associated with the deaths the cause of deaths." (R. 1267:6-13, Exhibit B to UVRMC's Mem. Opp'n to Pl.'s Second M. to Compel Disc.) The statistics bear this out. For example, P06810 identifies the cause of death the Hospital attributed to each neonatal death at the Hospital in 1995. (See Addendum, P06810.) The same is true for years 1996 - 1999. (See Addendum *generally*.) The Hospital also endeavors to identify congenital anomalies. (See Addendum *generally, e.g.*, P06812.)

The Hospital relies entirely upon candid and forthright information from the doctors and medical staff treating these infants as to the circumstances surrounding an infant mortality and the circumstances surrounding a morbidity, such as neurological outcomes from an intracranial hemorrhage. The Hospital analyzes the morbidity and mortality data to

² The statistics were admitted as Trial Exhibit 11, Bates Label P06803-P06855. (R. 7121; R. 8608, Vol. 6, p.1213:7-1215:17.) Plaintiffs created slides and questioned Dr. Stoddard among others regarding the statistics and the underlying data. (R. 8610, Vol. 8, pp. 1476-1505; *id.*, p.1501:16-1503:24 (questioning Dr. Stoddard as to underlying data identified at P06829)).

determine whether any harmful or aberrant trends exist, and uses that data to try and correct any such trends. This information is collected by the Hospital to be used by in-house staff committees for reviews and evaluations. (R. 1253:21-24 (Exhibit C) ("We use those as peer review, quality improvement, quality assurance . . . in order to give feedback to physicians and to staff.").)

Consistent with the purpose of the peer review privilege articulated in *Benson* and *Cannon*, the whole point of the statistics is to improve medical care and to reduce the incidence of infant morbidity and mortality. It is precisely the sort of information the legislature sought to protect in enacting the care review statute. *See* Utah Code Ann. § 26-25-1(1), (3). Removing the protection of the privilege in connection with statistics like these removes the incentive for doctors and medical staff to candidly and forthrightly report, record and discuss the underlying causes and conditions related to the mortality or morbidity--and it exposes these care providers to medical malpractice claims against themselves and their colleagues. The privilege is designed to insulate these communications and records. It should be applied here.

Moreover, as required by *Cannon*, the evidentiary basis for the application of privilege was established through sworn deposition testimony by the Hospital's witnesses. Dr. Minton testified under cross-examination that the purpose for collecting the morbidity and mortality statistics is to "figure out what [the Hospital is] doing right. We use those as peer review, quality improvement, quality assurance . . . in order to give feedback to physicians and to staff." (R. 1253:21-24 (Exhibit C).) Likewise, during cross-examination, Dr. Stoddard

testified that the statistics are used to "gauge [the Hospital's] performance with those of other hospitals and find out if there is significant variation." (*Id.*, R. 1257:10-12 (Exhibit B).)

In analogizing a state care review privilege with federal law's "self-critical analysis privilege," a New Mexico federal court analyzed and explained why care review privileges apply to morbidity and mortality information.³ See *Weekoty v. U.S.*, 30 F. Supp. 2d 1343, 1347 (D.N.M. 1998) ("[T]his privilege has been repeatedly recognized in the context of morbidity and mortality conferences conducted by physicians.") (collecting cases).

In holding the morbidity and mortality information privileged, the *Weekoty* court relied on testimony that the morbidity and mortality care review was "intended as a frank and candid discussion in which . . . physicians evaluate the quality and appropriateness of the techniques and procedures used in a patient's care and any recommended changes in these techniques or procedures." *Id.* at 1346 (omission in original). The court concluded that the "overwhelming public interest in providing physicians with a confidential context in which to evaluate the effectiveness of life-saving techniques and procedures" required recognition and application of the privilege. *Id.* at 1347-48 (quotation omitted). As the *Weekoty* court applied the privilege to morbidity and mortality discussions among physicians, Utah's care review statute and case law support applying the privilege to the morbidity and mortality statistics that are generated through that process. See *Benson ex rel. Benson*, 866 P.2d at 538; *Cannon*,

³ "New Mexico, like the vast majority of the other states, has recognized a self-critical analysis privilege in the medical context and has protected such discussions from discovery. See N.M. Stat. Ann. § 41-9-5 (precluding any party from using the confidential records of medical peer review proceedings in civil litigation)." *Weekoty v. U.S.*, 30 F. Supp. 2d 1343, 1347 (D.N.M. 1998).

2005 UT App 352, ¶ 22.⁴

The Wilsons do not challenge the content of the statistics or the testimony from the Hospital's doctors, both of which establish the basis for application of the privilege. (*See generally* Wilsons' Reply Brief at 22-24.) The Wilsons do not challenge the purpose for or the Hospital's use of the statistics. (*Id.*)⁵ Nor do the Wilsons attempt to defend the trial court's rulings requiring production and allowing admission of the statistics. (*Id.*)

Application of the care review privilege is a matter of law reviewed for correctness. *See Cannon*, 2005 UT App 352, ¶ 7. It is therefore significant that the Wilsons do not provide any facts, legal authority, or argument supporting the denial of this privilege. *Cf. West Jordan City v. Goodman*, 2006 UT 27, ¶ 29, 135 P.3d 874.⁶ There is no basis in the record or in the

⁴ "The Hospital has a legitimate interest in protecting reports under the care review privilege in order to ensure an open exchange of accurate information between personnel and administrators in order to improve . . . the quality of health care they provide. That interest is aligned with the very purpose behind the care review privilege to improve medical care by allowing health care personnel to reduce morbidity or mortality and to provide information to evaluate and improve hospital health care." *Cannon*, 2005 UT App 352, ¶ 22.

⁵ The Wilsons' claim that the Hospital made the relevant statistics public in its 2003 Annual Report is completely unfounded. (*See* Wilsons' Reply Brief at 23.) As the record clearly shows, the Annual Report includes a single paragraph referencing a 2003 study conducted *by a third-party*, the Vermont-Oxford Network, which found that McKay-Dee Hospital—*not* UVRMC—had low mortality and morbidity ratios. (R. 1173., Ex. F to Mem. in Supp. of Pls.' Second Mot. To Compel Disc. From Def. IHC.) The statistics cited by the Wilsons at R. 1172 are cardiovascular surgery mortality rates. They are not remotely at issue here.

⁶ "This court is not a depository in which the appealing party may dump the burden of argument and research. An adequately briefed argument must provide meaningful legal analysis. A brief must go beyond providing conclusory statements and fully identify, analyze, and cite its legal arguments. This analysis requires not just bald citation to authority but development of that authority and reasoned analysis based on that authority." *Id.* (footnotes and internal quotation marks omitted).

Wilsons' Reply Brief for denying application of the privilege. If this case is remanded, the Court should order that the morbidity and mortality statistics are privileged and cannot be used at trial.

B. The Wilsons' New Constitutional Argument is Procedurally Improper and Cannot be Used to Oppose the Hospital's Conditional Cross-Appeal.

The only issue before this Court with respect to the morbidity and mortality statistics is the Hospital's appeal challenging their discovery and admission. The Wilsons did not seek any affirmative relief with respect to these statistics as part of their appeal. (*See generally* Plaintiffs' Docketing Statement at 3-5.) Now, in connection with the Hospital's conditional cross-appeal, the Wilsons seek affirmative relief by requesting this Court to find the care review statute unconstitutional.⁷ (*See* Wilsons' Reply Brief at 22-24, purporting to "reassert" arguments of unconstitutionality).

The constitutionality argument fails for three procedural reasons. First, failure to identify an appellate issue pursuant to Utah R. App. P. 3(d) deprives an appellate court of jurisdiction to hear the issue. *See Jensen v. Intermountain Power Agency*, 1999 UT 10, ¶ 7, 977 P.2d 474. Second, failure to raise and affirmatively argue an issue precludes appellate review. *See generally* Utah R. App. P. 24(a)(5) (opening brief must include issues presented for review); *id.* 24(a)(10) (opening brief must state affirmative relief sought). The Wilsons' request for an affirmative ruling on the constitutionality of the statute, raised for the first time in opposition

⁷ The Wilsons chose not to challenge the constitutionality of Utah Code Ann. § 26-25-3 in their own appeal by declining to seek review of the trial court's denial of their Motion to Strike Utah Code Annotated 26-25-3 as Unconstitutional. (*See* R. 3085.)

to the Hospital's conditional cross-appeal, runs afoul of both of these rules and must therefore be disregarded.

Third, the Wilsons lack standing to seek affirmative relief with respect to the trial court's ruling allowing discovery and admission of the statistics. It is well settled that "[t]he right to appeal is limited to parties who are aggrieved in some appreciable manner by the [order]." 5 Am. Jur. 2d *Appellate Review* § 242 (2010). "A person is aggrieved if the judgment bears directly and injuriously on his or her interests." *Id.*; see generally *Uselton v. Commercial Lovelace Motor Freight, Inc.*, 9 F.3d 849, 854 (10th Cir. 1993) ("To have standing, one must be aggrieved by the order from which appeal is taken.").

Far from being aggrieved by the rulings challenged by the Hospital on appeal, the Wilsons sought and received the full benefit of the lower court's rulings, and actually used the statistics extensively throughout trial (*See, e.g.*, R. 8608, Vol 6, pp. 1215.18 - 1220.22; R. 8610, Vol 8, pp 1476-1505; R. 8621, Vol 19, pp. 3884:24 - 3885.2.) Having suffered no legally cognizable injury from the rulings, the Wilsons have no standing to seek affirmative relief related to the statistics

C. Beyond the Procedural Defects of Their Argument, the Wilsons Cannot Overcome the Presumption of Constitutionality.

Beyond its procedural impediments, the Wilsons' constitutionality argument also fails as a matter of substantive law. The Wilsons must first overcome the presumption of constitutionality that has been recognized by this Court. *See, e.g., Tindley v. Salt Lake City Sch. Dist.*, 2005 UT 30, ¶ 11, 115 P.3d 295 ("[T]he challenged statute is presumed constitutional, and we resolve any reasonable doubts in favor of constitutionality") (citation omitted); *Trade*

Comm'n v. Skaggs Drug Ctrs., Inc., 446 P.2d 958, 962 (Utah 1968) ("Those who assert the invalidity of the statute must bear the burden of showing it to be unconstitutional.").

The Wilsons provide no meaningful analysis concerning the constitutionality of Utah Code Ann. § 26-25-3, despite this burden. (Wilson's Reply Brief at 23-24.) Rather, they list three constitutional provisions and summarily assert, without explanation, that the care review statute violates each of the provisions. (*Id.*) The end result is the same even if the Wilsons had provided meaningful analysis or argument. The care review statute does not violate the open courts provision, the separation of powers clause or the due process clause.

To establish unconstitutionality under the open courts provision, Utah Const. art. I, § 11, the Wilsons must show that Utah Code Ann. § 26-25-3 abrogates an existing legal remedy. *Laney v. Fairview City*, 2002 UT 79, ¶ 49, 57 P.3d 1007 ("A legislative enactment that does not eliminate a remedy is not unconstitutional under the open courts provision."). If the statute does not abrogate a cause of action, the constitutionality analysis ends. *Id.* The care review statute does not restrict the Wilsons' ability to sue for medical malpractice and does not limit, in any way, the remedies available to the Wilsons under such a claim. *See Tindley*, 2005 UT 30, ¶ 11 (courts "resolve any reasonable doubts in favor of constitutionality."). The care review statute does not violate the open courts provision.

To establish unconstitutionality under the separation of powers clause, Utah Const. art. V, § 1, the Wilsons must show that the care review statute impermissibly restricts the judiciary's ability to dispense justice. *See generally id.*; *Judd v. Drezga*, 2004 UT 91, ¶ 37, 103 P.3d 135. The statute's limitations on the "discovery, use or receipt," Utah Code Ann. § 26-

25-3, of confidential care review information do not prevent courts or juries from hearing and evaluating legal controversies between medical malpractice plaintiffs and defendants, i.e., dispensing justice. The Wilsons have provided no meaningful argument to the contrary. Thus, the care review statute does not violate the separation of powers clause.

To prove unconstitutionality under the due process clause, Utah Const. art. I, § 7, the Wilsons must show that the care review statute has *no* reasonable relation to a proper legislative purpose and that the statute is arbitrary and discriminatory. *Tindley*, 2005 UT 30, ¶ 29. Because the statute does not implicate a fundamental right, *id.*, it needs only be rationally related to any legitimate governmental objective to pass constitutional muster. *Id.* ¶¶ 29, 34. This Court has repeatedly recognized the important public and legislative policies served by the peer review statute: "The purpose of these statutes is to improve medical care by allowing health-care personnel to reduce 'morbidity or mortality' and to provide information to evaluate and improve 'hospital and health care.'" *Benson ex rel. Benson*, 866 P.2d at 539; *see also Cannon*, 2005 UT App 352, ¶ 22. The rational relationship between the statute and the legislative goal of improving health care and reducing the incidence of disease, morbidity and mortality demonstrates constitutionality under the due process clause.

II. THE WILSONS DO NOT CONTEST THAT JURY INSTRUCTION NO. 39 (THE *BARBUTO* INSTRUCTION) WAS GIVEN IN ERROR.

In its conditional cross-appeal, the Hospital argued the trial court erred in giving Jury Instruction No. 39 because parts of that instruction misstated the law. (Hospital's Brief at 39-40.) The Wilsons relied upon this instruction to argue that the Hospital's April 2003 meeting with Dr. Boyer was prohibited by Utah law. (R. 8621, Vol. 19, pp. 3805:19 -

3806:2.) The Wilsons do not respond to the Hospital's challenge to Jury Instruction No. 39 and have accordingly acquiesced in the Hospital's position.⁸ (*See generally* Wilsons' Reply Brief at 11-22.)

This decision is perhaps unsurprising since, prior to *Sorensen v. Barbuto*, 2008 UT 8, 177 P.3d 614 ("*Barbuto II*"), "[n]o ethical rule prohibit[ed] ex parte contact with plaintiff's treating physician when plaintiff's physical condition is at issue." UT Eth. Op. 99-03 (1999) vacated by *Barbuto II*, 2008 UT 8, ¶ 26 (February 1, 2008). Moreover, prior to at least *Sorenson v. Barbuto*, 2006 UT App 340, 143 P.3d 295 ("*Barbuto I*"), it could not be seriously contended that physicians were in breach of their duties by meeting *ex parte* with counsel in medical malpractice actions. *See id.* ¶ 16. Thus, the April 2003 meeting with Dr. Boyer was permissible and Jury Instruction No. 39 was not.⁹

⁸ Where a party fails to respond to an issue in its brief, the court may treat the failure to respond as a confession that the other party's position is correct. *See* 5 Am. Jur. 2d *Appellate Review* § 512 (2010); *see also Trammell v. State*, 622 So.2d 1257, 1261 (Miss. 1993) ("Failure of [the appellee] to reply to the issue is tantamount to a confession that [appellant's] position is correct."); *State v. Davidson*, 589 N.W.2d 38, 46 (Wis. Ct. App. 1998), *rev'd on other grounds*, 613 N.W.2d 606 ("If a respondent does not refute an assertion made by the appellant, he or she is considered to have acquiesced to it.")

⁹ Apparently recognizing this, the Wilsons limit their challenge in their Reply Brief to any contact or communications with physicians after August 10, 2006 (date of *Barbuto I*). (*See generally* Wilsons' Reply Brief at 13 ("In light of the clear prohibition in *Barbuto I* and *II*, it is both puzzling and concerning that IHC's counsel, after *August 10, 2006 . . .* would conduct ex parte meetings with Jared Wilson's doctors . . .") (emphasis added).) The Wilsons do make the inflammatory assertion that, through its meeting with Dr. Boyer in 2003, the Hospital "was able to turn him and the medical record into key evidence against Jared." (Wilsons' Reply Brief at 18.) First, this point is moot because Dr. Boyer's testimony went to causation and the jury never reached this issue. Second, contrary to the Wilsons' claims at trial, *Debry v. Goates*, decided by the Court of Appeals in 2000, did not prohibit the 2003 meeting with Dr. Boyer. *Debry* involved claims brought against a treating mental health care provider for voluntarily providing an affidavit to the patient's ex-husband in an alimony contest. *Id.*, 2000

Because the law in April 2003 did not proscribe the meeting with Dr. Boyer, the Court should direct the withdrawal of Jury Instruction 39 and prohibit the use of any similar instruction should the case be remanded.

III. THE WILSONS DO NOT CONTEST THE HOSPITAL'S ARGUMENTS FOR COSTS.

The Hospital is entitled to costs as the prevailing party at trial. *See* Utah R. Civ. P. 54(d). The trial court erred in taxing costs against Jared but not his parents, who initiated the unsuccessful lawsuit on behalf of their minor son. (Hospital's Brief at 44-46.) In its brief, the Hospital set forth the relevant law and provided the necessary analysis as to why the trial court should have taxed costs against Jerome and Leilani Wilson, Jared's parents. (*Id.*) In addition, the Hospital is entitled to its costs for the trial transcripts now that the Wilsons have used those transcripts on appeal. (Hospital's Brief at 46); *see also Highland Constr. Co. v. Union Pac. R.R. Co.*, 683 P.2d 1042, 1052 (Utah 1984).) As with the Hospital's argument on Jury Instruction No. 39, the Wilsons have not responded to these points in any manner and have accordingly acquiesced in the Hospital's position. *See supra* note 8.

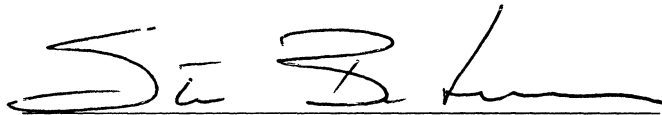
UT App 58, ¶ 11, 999 P.2d 582. The therapist was not sued for medical malpractice and the therapist's care of the plaintiff patient was not at issue in the divorce proceeding. *Id.* In contrast, this case involves medical malpractice claims alleging that the Hospital was negligent in providing Jared's care. As a treating physician, Dr. Boyer was a fact witness in a case that hinges completely upon Jared's physical condition.

CONCLUSION

Based on the foregoing discussion and argument, as well as that set forth in the Hospital's Brief on cross-appeal, the Court should direct that costs are properly taxed against Jerome and Leilani Wilson, including an award of costs associated with trial transcripts. Should the case be remanded, the Court should rule that the neonatal morbidity and mortality statistics are privileged and inadmissible as evidence and should also direct the withdrawal of Jury Instruction 39 and prohibit the use of any similar instruction.

DATED this 13th day of August, 2010.

MANNING, CURTIS, BRADSHAW & BEDNAR, LLC

A handwritten signature in black ink, appearing to read 'Steven C. Bednar', written over a horizontal line.

Steven C. Bednar
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Hospitals Inc. dba Utah Valley Regional Medical Center*

CERTIFICATE OF SERVICE

I hereby certify that on the 13th day of August, 2010, I caused to be served in the manner indicated below two true and correct copies of **CROSS-APPEAL REPLY BRIEF OF DEFENDANT-APPELLEE AND CROSS-APPELLANT IHC HOSPITALS, INC., dba UTAH VALLEY REGIONAL MEDICAL CENTER** upon the following:

<input type="checkbox"/> VIA FACSIMILE <input checked="" type="checkbox"/> VIA HAND DELIVERY <input type="checkbox"/> VIA U.S. MAIL <input type="checkbox"/> VIA FEDERAL EXPRESS <input type="checkbox"/> VIA EMAIL	Roger P. Christensen Scott T. Evans CHRISTENSEN & JENSEN, PC 15 W. South Temple, Suite 800 Salt Lake City, UT 84101 <i>Attorney for Plaintiffs</i>
<input type="checkbox"/> VIA FACSIMILE <input checked="" type="checkbox"/> VIA HAND DELIVERY <input type="checkbox"/> VIA U.S. MAIL <input type="checkbox"/> VIA FEDERAL EXPRESS <input type="checkbox"/> VIA EMAIL	Joseph W. Steele STEELE & BIGGS 5664 Green Street Salt Lake City, UT 84123 <i>Attorney for Plaintiffs</i>



ADDENDUM

Utah Valley Regional Medical Center
Newborn Intensive Care Unit
1995 (Jan) - 1999 (June) Experience

Gestational Age in Weeks at Birth						
ALL INFANTS	<23 Wk	23-24 Wk	25-26 Wk	27-28 Wk	29-30 Wk	31-32 Wk
Number of Admissions	4	38	59	91	138	229
% Transported to UVRMC	0%	18%	17%	21%	23%	16%
% Transported from UVRMC to Another Hosp	0%	5%	7%	3%	3%	5%
% of Babies Who Survive	0%	42%	80%	93%	97%	98%
Time of Death*	0 - 0.6 - 4.2 (h)	0.6 - 2.6 - 35 (d)	0.5 - 4.6 (d)	7 - 47 (d)	10 - 28 - 96 (d)	10 - 8 - 42 (d)
INFANTS WHO SURVIVE	<23 Wk	23-24 Wk	25-26 Wk	27-28 Wk	29-30 Wk	31-32 Wk
VENTILATION						
% of Babies Not On Vent		0%	0%	0%	17%	18%
% of Babies on Vent <48h		0%	0%	9%	27%	20%
% of Babies on Vent >48h		100%	100%	91%	56%	32%
# of Days on Vent*		48 - 63 - 89	35 - 57 - 72	31 - 53	12 - 55 - 19	0 - 9 - 35 - 71
On Extra O2 @ 30d		75%	72%	9%	25%	4%
On Extra O2 @ 53d		44%	10%	1%	16%	4%
SURGERY						
% Requiring PDA Surgery		38%	18%	18%	6%	2%
% Requiring NEC Surgery		0%	0%	2%	2%	0%
% Requiring ROP Surgery		56%	15%	11%	1%	0%
FEEDINGS						
Day of 1st Feeding		12 - 20 - 23	7 - 11 - 23	5 - 8 - 12	2 - 4 - 7	1 - 2 - 4
Day of Full Feeding		37 - 44 - 51	29 - 39 - 54	21 - 27 - 39	10 - 14 - 22	7 - 9 - 13
NEURO OUTCOME						
% with Severe Injury (IVH/PVL)		31%	21%	16%	6%	2%
% of Above req Shunt		20%	10%	29%	25%	20%
% with mod/sev Hearing Deficit		0%	9%	11%	1%	1%
% Seen in NICU Follow Up Clinic						
LENGTH OF STAY IN NICU*						
Days in NICU Before Going Home*		103 - 110 - 153	82 - 105 - 118	60 - 69 - 89	38 - 47 - 57	23 - 29 - 37
Relative Cost of Care**						

* = 25th - 50th - 75th %-tiles

** = 25th - 50th - 75th %-tiles, Ratio of [NICU Charges] [Median WBN Charges] at UVRMC

PREPARED BY drg 1999 12 19

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UVRMC 1995 STATISTICS

INBORN

Total Live Births	3917
Prematures (≤ 37 wks)	503 (12.8%)
LBW (< 2500 gms)	289 (7.4%)
C/Sections	575 (14.7%)
Anomalies	25
Twins	48
Triplets	2
Fetal Deaths > 20 weeks	17
Neonatal Deaths > 500 gms	9
Total Fetal & Neonatal Deaths	26
Total Live Births & Fetal Deaths	3934
Neonatal Deaths Corrected for Malformations	5
Perinatal Deaths (corrected)	21

CALCULATIONS

Neonatal Mortality 9/3917	2.3
Perinatal Mortality 26/3934	6.6
Corrected Neonatal Mortality 5/3917	1.3
Corrected Perinatal Mortality 21/3934	5.3

INTERNATIONAL PERINATAL MORTALITY

Perinatal I

$$\frac{\text{Stillborns} > 1000 \text{ gm} + \text{Deaths First 7 days} > 1000 \text{ gm}}{\text{Stillborns} > 1000 \text{ gm} + \text{All Live Born Infants}} \times 1000 = \frac{11 + 4}{11 + 3917} = 3.82$$

Perinatal II

$$\frac{\text{Fetal Deaths} > 500 \text{ gm} + \text{All Neonatal Deaths}}{\text{Fetal Deaths} > 500 \text{ gm} + \text{All Live Births}} \times 1000 = \frac{17 + 9}{17 + 3917} = 6.61$$

UVRMC STATISTICS 1995				
INBORN STATISTICS				
A. WEIGHT (Gms)	LIVE BIRTHS	STILL BIRTHS	EXPIRED	SURVIVAL %
< 500	9	0	7	22%
501 - 600	9	2	4	56%
601 - 700	6	2	2	67%
701 - 800	5	1	0	100%
801 - 900	4	1	1	75%
901 - 1000	8	0	0	100%
1001 - 1250	14	1	0	100%
1251 - 1500	10	1	0	100%
1501 - 2000	71	0	2	97%
2001 - 2500	156	3	1	99%
2501 - 3000	564	6	2	99.6%
3001 - 3500	1434	0	0	100%
3501 - 4000	1242	0	1	99.9%
> 4001	385	0	0	100%
TOTAL	3917	17	20*	
B. GESTATIONAL AGE (Wks)	LIVE BIRTHS	STILL BIRTHS	EXPIRED	SURVIVAL %
< 20	0	0	0	0%
20 - 21	5	0	5	0%
22 - 23	3	2	2	33%
24 - 25	10	1	3	70%
26 - 27	14	2	3	78.6%
28 - 29	17	0	1	94%
30 - 31	22	0	1	95%
32 - 33	42	2	0	100%
34 - 35	93	1	0	100%
36 - 37	296	3	0	100%
38 - 39	1445	4	4	99.7%
40 - 42	1965	2	1	99.9%
> 42	4	0	0	100%
TOTAL	3917	17	20*	
C. UVRMC Neonatal Mortality = 2.3 per 1000 live births Perinatal Mortality Rate = 6.6 per 1000 live births Low Birth Weight = 289 (7.4%) Prematures = 503 (12.8%)				

*These are all deaths, early and late, of patients born at UVRMC in 1995. It includes 7 deaths in Labor and Delivery and 3 deaths of patients transported out.

UVRMC STATISTICS 1995			
NICU STATISTICS			
A. WEIGHT (Gms)	ADMISSIONS	EXPIRED	SURVIVAL %
< 500	3	2	33%
501 - 600	5	3	40%
601 - 700	7	3	57%
701 - 800	7	0	100%
801 - 900	7	1	86%
901 - 1000	10	0	100%
1001 - 1250	19	0	100%
1251 - 1500	19	0	100%
1501 - 2000	76	1	99%
2001 - 2500	73	0	100%
2501 - 3000	79	2	97.5%
3001 - 3500	69	0	100%
3501 - 4000	48	0	100%
> 4001	22	0	100%
TOTAL	444	12*	
B. GESTATIONAL AGE (Wks)	ADMISSIONS	EXPIRED	SURVIVAL %
< 20	0	0	0%
20 - 21	0	0	0%
22 - 23	2	2	0%
24 - 25	9	3	67%
26 - 27	23	3	87%
28 - 29	24	1	96%
30 - 31	31	1	97%
32 - 33	58	0	100%
34 - 35	79	0	100%
36 - 37	74	0	100%
38 - 39	70	2	97%
40 - 42	74	0	100%
> 42	0	0	100%
TOTAL	444	12*	
C. NICU Mortality Rate = 2.7%			
Low Birth Weight = 226 (50.9%)*			
Prematures = 300 (67.6%)			

*These are all deaths, early and late, which occurred in the NICU at UVRMC. It includes 2 deaths of babies transported in and excludes 7 deaths in Labor and Delivery. It also excludes 4 deaths of patients transported to other hospitals. Four of these, 12 NICU deaths were late deaths.

UTAH VALLEY REGIONAL MEDICAL CENTER
NBICU (SURVIVAL)
1985 - 1995

Birth Weight	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
< 500		1/1 (100%)	0/2 (0%)	0/1 (0%)	2/7 (29%)	0/5 (0%)	1/3 (33%)	1/3 (33%)	0/0 ---	0/1 (0%)	1/3 (33%)
501 - 700	5/10 (50%)	5/9 (55.5%)	0/5 (0%)	4/11 (36%)	7/9 (78%)	2/7 (29%)	4/5 (80%)	4/8 (50%)	4/7 (57%)	5/7 (71%)	6/12 (50%)
701 - 850	2/4 (50%)	7/8 (87.5%)	5/5 (100%)	3/4 (75%)	5/7 (71%)	5/6 (83%)	14/14 (100%)	12/12 (100%)	6/9 (67%)	6/8 (75%)	13/14 (93%)
851 - 1000	1/6 (16%)	6/9 (67.7%)	5/6 (84%)	5/7 (71%)	13/15 (87%)	10/10 (100%)	11/12 (92%)	2/2 (100%)	13/14 (93%)	12/12 (100%)	10/10 100%
1001 - 1500	32/38 (94%)	30/35 (86%)	23/25 (92%)	23/24 (96%)	28/30 (93%)	24/27 (89%)	34/35 (97.1%)	35/35 (100%)	38/38 (100%)	39/39 (100%)	38/38 (100%)
1501 - 2000	48/51 (76%)	61/62 (99%)	56/57 (99%)	61/65 (94%)	52/53 (98%)	51/51 (100%)	49/49 (100%)	64/68 (94%)	51/52 (98%)	71/72 (99%)	75/76 (99%)
2001 - 2500	80/85 (95%)	90/94 (96%)	78/78 (100%)	88/91 (97%)	89/90 (99%)	68/69 (99%)	73/74 (98.6%)	56/58 (97%)	75/76 (99%)	53/54 (98%)	73/73 (100%)
> 2501	331/340 (98%)	291/293 (99.99%)	287/289 (99.99%)	298/300 (99.3%)	250/250 (100%)	281/281 (100%)	272/274 (99.3%)	254/257 (98.8%)	238/240 (99%)	248/250 (99%)	216/218 (99%)
	498/534 (83%)	491/511 (96%)	454/467 (97.2%)	482/503 (95.8%)	446/461 (96.7%)	441/456 (96.7%)	458/466 (98.3%)	427/442 (96.6%)	425/436 (97.5%)	434/443 (98%)	432/444 (97%)

UTAH VALLEY REGIONAL MEDICAL CENTER STATISTICS

NEWBORN INTENSIVE CARE UNIT

10 YEAR CUMMULATIVE MORTALITY

1986 - 1995

WEIGHT	ADMISSIONS	DEATHS	% MORTALITY
< 500	26	20	77%
501 - 700	80	39	49%
701 - 850	87	11	13%
851 - 1000	97	10	10%
1001 - 1500	326	14	4 3%

UTAH VALLEY REGIONAL MEDICAL CENTER

COMPARATIVE STATISTICS

Inborn (1986 - 1995)

	<u>Live Births</u>	<u>Stillbirths</u>	<u>Deaths</u>	<u>Neonatal Mortality</u>	<u>Perinatal Mortality</u>
1986	4,032	24	22	5.5	11.34
1987	3,590	26	13	2.51	7.77
1988	3,734	15	15	3.75	7.21
1989	3,739	27	17	2.67	9.04
1990	3,862	17	14	2.33	4.91
1991	3,878	12	12	1.81	4.63
1992	3,969	15	14	2.77	6.53
1993	3,872	18	12	2.84	7.46
1994	3,929	9	8	2.04	6.08
1995	3,917	17	9	2.30	6.60

NBICU (1986 - 1995)

	<u>Admissions</u>	<u>Deaths</u>	<u>Transports</u>	<u>Mortality Rate</u>
1986	511	20	?	3.9%
1987	467	13	100	2.8%
1988	503	21	135	4.2%
1989	461	15	122	3.3%
1990	456	15	113	3.3%
1991	466	8	112	1.72%
1992	442	15	101	3.4%
1993	436	11	118	2.52%
1994	443	9	125	2.03%
1995	444	12	119	2.7%

NEONATAL DEATHS 1995
UTAH VALLEY REGIONAL MEDICAL CENTER

I. INBORN NEONATAL DEATHS

	<u>NAME</u>	<u>WT</u>	<u>G.A.</u>	<u>AGE@DEATH</u>	<u>DIAGNOSIS</u>
1.	██████████	629gms	23wks	14 hrs	Ext. Prem, Sepsis, RDS, Shock
2.	██████████	1635gms	31wks	8 days	Sepsis, Grd. IV ICH, RDS
3.	██████████	510gms	21wks	15 min	Extreme Prematurity
4.	██████████*	525gms	24wks	5 min	Extreme Prematurity
5.	██████████	340gms	20wks	10 min	Extreme Prematurity
6.	██████████ #2*	340gms	25wks	5 min	Extreme Prematurity
7.	██████████	2550gms	39wks	6 hrs	L. CDH, Cong. Heart Failure
8.	██████████ #2	390gms	26wks	6 days	IUGR, Renal Failure, RDS
9.	██████████***	1965gms	41wks	4 days	Trisomy 13, Pulm. Hypoplasia
10.	██████████**	2040gms	39wks	2 days	Trisomy 18, VSD, ASD, PDA, Coarc
11.	██████████	2750gms	38wks	3 hrs	4p- syn., Cong. D. Hernia
12.	██████████*	<500gms	21wks	minutes	Twins, Extreme Prematurity,
13.	██████████	<500gms	21wks	minutes	Expired in L & D.
14.	██████████	620gms	29wks	25 days	Prem., IUGR, Severe NEC
15.	██████████*	312gms	21wks	minutes	Extreme Prematurity

II. TRANSPORTS IN - NEONATAL DEATHS

1.	██████████	560gms	24wks	10 days	RDS, Air leak, Premature.
2.	██████████	700gms	24wks	26 hrs	Prem, RDS, Gr IV ICH, Sepsis
3.	██████████*	2608gms	37wks	2 days	Group B Strep Sepsis, Shock

III. LATE DEATHS

1.	██████████ #3	440gms	26wks	55 days	NEC, RDS, Renal Failure
2.	██████████	588gms	23wks	8 mon	Chronic Resp. Failure
3.	██████████	550gms	24wks	44 days	Prem, Renal Failure.
4.	██████████	3897gms	39wks	58 days	Prim. Pulm. Hypertension
5.	██████████	810gms	26wks	3 mon	Prem, Viral Sepsis, Hydroceph.

* Never admitted to NBICU

** Transported in then out for ECMO. Died in Arizona on ECMO.

*** Transported to PCMC and died there.

**** Transported to Denver for Nitric Oxide. Died in Colorado.

STILLBIRTHS 1995

UTAH VALLEY REGIONAL MEDICAL CENTER

	<u>NAME</u>	<u>WEIGHT</u>	<u>G.A.</u>	<u>DATE</u>
1.	██████████	2920gms	37wks	1/24/95
2.	██████████	510gms	22wks	1/30/95
3.	██████████	1417gms	36wks	3/19/95
4.	██████████	2410gms	38wks	3/28/95
5.	██████████	567gms	26wks	3/30/95
6.	██████████	2013gms	33wks	3/31/95
7.	██████████	822gms	32wks	5/5/95
8.	██████████	2637gms	39wks	5/20/95
9.	██████████	624gms	23wks	6/23/95
10.	██████████	1077gms	34wks	8/6/95
11.	██████████	680gms	26wks	8/25/95
12.	████████████████████	2892gms	40wks	9/4/95
13.	██████████	2750gms	39wks	9/8/95
14.	██████████	2832gms	40wks	10/2/95
15.	██████████	>1000gms	37wks	10/11/95
16.	██████████	2977gms	39wks	10/28/95
17.	██████████	709gms	24wks	11/8/95

1995 CONGENITAL ANOMALIES
UTAH VALLEY REGIONAL MEDICAL CENTER

1. Extrophy of the Bladder
2. Encephalocele
3. Omphalocele - 3
4. Trisomy 21 - 2
5. Congenital Heart Disease - 6
 - Tetralogy of Fallot - 2
 - Coarctation of the Aorta - 2
 - Pulmonary Atresia
 - Multiple Anomalies - 1
6. Imperforate Anus - 2
7. Noonan Syndrome
8. Trisomy 18 - 3
9. Trisomy 13
10. Congenital Diaphragmatic Hernia - 3
11. 4p- Syndrome
12. Spina Bifida
13. Multiple Mild Abnormalities
14. Cleft Palate
15. T-E Fístula

Total Major Congenital Anomalies = 25

UVRMC 1996 STATISTICS

INBORN

Total Live Births	4162
Prematures (≤ 37 wks)	558 (13.4%)
LBW (< 2500 gms)	300 (7.2%)
C/Sections	578 (13.9%)
Anomalies	42
Twins	53
Triplets	3
Fetal Deaths > 20 weeks	18
Neonatal Deaths > 500 gms	9
Total Fetal & Neonatal Deaths	27
Total Live Births & Fetal Deaths	4180
Neonatal Deaths Corrected for Malformations	5
Perinatal Deaths (corrected)	22

CALCULATIONS

Neonatal Mortality 9/4162	2.2
Perinatal Mortality 27/4180	6.4
Corrected Neonatal Mortality 5/4162	1.2
Corrected Perinatal Mortality 22/4180	5.3

INTERNATIONAL PERINATAL MORTALITY

Perinatal I

$$\frac{\text{Stillborns} > 1000 \text{ gm} + \text{Deaths First 7 days} > 1000 \text{ gm}}{\text{Stillborns} > 1000 \text{ gm} + \text{All Live Born Infants}} \times 1000 = \frac{8 + 2}{8 + 4162} = 2.39$$

Perinatal II

$$\frac{\text{Fetal Deaths} > 500 \text{ gm} + \text{All Neonatal Deaths}}{\text{Fetal Deaths} > 500 \text{ gm} + \text{All Live Births}} \times 1000 = \frac{12 + 9}{12 + 4162} = 5.03$$

UVRMC STATISTICS 1996				
INBORN STATISTICS				
A. WEIGHT (Gms)	LIVE BIRTHS	STILL BIRTHS	EXPIRED	SURVIVAL %
< 500	6	6*	6	0%
501 - 600	8	1	4	50%
601 - 700	3	0	0	100%
701 - 800	4	2	1	75%
801 - 900	4	0	1	75%
901 - 1000	6	1	1	83%
1001 - 1250	20	1	1	95%
1251 - 1500	22	1	0	100%
1501 - 2000	66	0	1	98%
2001 - 2500	159	1	0	100%
2501 - 3000	619	2	1	99 %
3001 - 3500	1569	2	0	100%
3501 - 4000	1277	1	1	99%
> 4001	399	0	0	100%
TOTAL	4162	18	17**	99%
B. GESTATIONAL AGE (Wks)	LIVE BIRTHS	STILL BIRTHS	EXPIRED	SURVIVAL %
< 20	2	0	2	0%
20 - 21	1	2	1	0%
22 - 23	6	2	4	33%
24 - 25	9	0	2	78%
26 - 27	11	1	3	73%
28 - 29	14	5	0	100%
30 - 31	29	0	2	93%
32 - 33	55	2	0	100%
34 - 35	86	0	2	98%
36 - 37	345	0	0	100%
38 - 39	1625	5	1	99%
40 - 42	1972	1	0	100%
> 42	7	0	0	100%
TOTAL	4162	18	17**	99%
C. UVRMC Neonatal Mortality = 2.2 per 1000 live births Perinatal Mortality Rate = 6.4 per 1000 live births Low Birth Weight = 300 (7.2%) Prematures = 558 (13.4%)				

* Stillbirths <500gms but >20 weeks gestation

**These are all deaths, early and late, of patients born at UVRMC in 1996. It includes 4 deaths in Labor and Delivery and 1 death of a patient transported out.

UVRMC STATISTICS 1996			
NICU STATISTICS			
A. WEIGHT (Gms)	ADMISSIONS	EXPIRED	SURVIVAL %
< 500	3	3	0%
501 - 600	8	6	25%
601 - 700	3	0	100%
701 - 800	6	1	83%
801 - 900	7	1	86%
901 - 1000	6	1	83%
1001 - 1250	23	1	96%
1251 - 1500	33	0	100%
1501 - 2000	68	0	100%
2001 - 2500	78	1	99%
2501 - 3000	72	0	100%
3001 - 3500	93	0	100%
3501 - 4000	66	3	95%
> 4001	33	0	100%
TOTAL	499	17*	97%
B. GESTATIONAL AGE (Wks)	ADMISSIONS	EXPIRED	SURVIVAL %
< 20	0	0	0%
20 - 21	1	1	0%
22 - 23	5	5	0%
24 - 25	12	2	83%
26 - 27	14	3	79%
28 - 29	20	0	100%
30 - 31	32	1	97%
32 - 33	68	0	100%
34 - 35	78	1	99%
36 - 37	70	0	100%
38 - 39	85	1	99%
40 - 42	113	3	97%
> 42	1	0	100%
TOTAL	499	17	97%
C. NICU Mortality Rate = 3.2%			

*These are all deaths, early and late, which occurred in the NICU at UVRMC. It includes 6 deaths of babies transported in and excludes 4 deaths in Labor and Delivery. It also excludes 2 deaths of patients transported to other hospitals. Four of these 17 NICU deaths were late deaths.

UTAH VALLEY REGIONAL MEDICAL CENTER
NBICU (SURVIVAL)
1986 - 1996

Birth Weight	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
< 500	1/1 (100%)	0/2 (0%)	0/1 (0%)	2/7 (29%)	0/5 (0%)	1/3 (33%)	1/3 (33%)	0/0 --	0/1 (0%)	1/3 (33%)	0/3 (0%)
501 - 700	5/9 (55.5%)	0/5 (0%)	4/11 (36%)	7/9 (78%)	2/7 (29%)	4/5 (80%)	4/8 (50%)	4/7 (57%)	5/7 (71%)	6/12 (50%)	5/11 (45%)
701 - 850	7/8 (87.5%)	5/5 (100%)	3/4 (75%)	5/7 (71%)	5/6 (83%)	14/14 (100%)	12/12 (100%)	6/9 (67%)	6/8 (75%)	13/14 (93%)	7/9 (78%)
851 - 1000	6/9 (67.7%)	5/6 (84%)	5/7 (71%)	13/15 (87%)	10/10 (100%)	11/12 (92%)	2/2 (100%)	13/14 (93%)	12/12 (100%)	10/10 100%	9/10 (90%)
1001 - 1500	30/35 (86%)	23/25 (92%)	23/24 (96%)	28/30 (93%)	24/27 (89%)	34/35 (97.1%)	35/35 (100%)	38/38 (100%)	39/39 (100%)	38/38 (100%)	55/56 (98%)
1501 - 2000	61/62 (99%)	56/57 (99%)	61/65 (94%)	52/53 (98%)	51/51 (100%)	49/49 (100%)	64/68 (94%)	51/52 (98%)	71/72 (99%)	75/76 (99%)	68/68 (100%)
2001 - 2500	90/94 (96%)	78/78 (100%)	88/91 (97%)	89/90 (99%)	68/69 (99%)	73/74 (98.6%)	56/58 (97%)	75/76 (99%)	53/54 (98%)	73/73 (100%)	77/78 (99%)
> 2501	291/293 (99.99%)	287/289 (99.99%)	298/300 (99.3%)	250/250 (100%)	281/281 (100%)	272/274 (99.3%)	254/257 (98.8%)	238/240 (99%)	248/250 (99%)	216/218 (99%)	261/264 (99%)
	491/511 (96%)	454/467 (97.2%)	482/503 (95.8%)	446/461 (96.7%)	441/456 (96.7%)	458/466 (98.3%)	427/442 (96.6%)	425/436 (97.5%)	434/443 (98%)	432/444 (97%)	482/489 (96.5%)

UTAH VALLEY REGIONAL MEDICAL CENTER STATISTICS

10 YEAR CUMMULATIVE MORTALITY

1986 - 1996

WEIGHT	ADMISSIONS	DEATHS	% MORTALITY
< 500	29	23	79%
501 - 700	91	45	49%
701 - 850	96	13	14%
851 - 1000	107	11	10%
1001 - 1500	382	15	4.0%

UTAH VALLEY REGIONAL MEDICAL CENTER

COMPARATIVE STATISTICS

Inborn (1986 - 1996)

	<u>Live Births</u>	<u>Stillbirths</u>	<u>Deaths</u>	<u>Neonatal Mortality</u>	<u>Perinatal Mortality</u>
1986	4,032	24	22	5.5	11.34
1987	3,590	26	13	2.51	7.77
1988	3,734	15	15	3.75	7.21
1989	3,739	27	17	2.67	9.04
1990	3,862	17	14	2.33	4.91
1991	3,878	12	12	1.81	4.63
1992	3,969	15	14	2.77	6.53
1993	3,872	18	12	2.84	7.46
1994	3,929	9	8	2.04	6.08
1995	3,917	17	9	2.30	6.60
1996	4,162	18	9	2.20	6.40

NBICU (1986 - 1996)

	<u>Admissions</u>	<u>Deaths</u>	<u>Transports</u>	<u>Mortality Rate</u>
1986	511	20	?	3.9%
1987	467	13	100	2.8%
1988	503	21	135	4.2%
1989	461	15	122	3.3%
1990	456	15	113	3.3%
1991	466	8	112	1.72%
1992	442	15	101	3.4%
1993	436	11	118	2.52%
1994	443	9	125	2.03%
1995	444	12	119	2.7%
1996	499	17	132	3.4%

NEONATAL DEATHS 1996
UTAH VALLEY REGIONAL MEDICAL CENTER

I. INBORN NEONATAL DEATHS

<u>NAME</u>	<u>WT</u>	<u>G.A.</u>	<u>AGE@DEATH</u>	<u>DIAGNOSIS</u>
1. [REDACTED]	780 gms	24 wks	3 days	Ext. Prematurity, Chronic Abrupton, Severe IVH
2. [REDACTED]	1162 gms	34 wks	10 min	Multiple Congenital Anomalies
3. [REDACTED]	226 gms	20 wks	1.5 hrs	Extreme Prematurity
4. [REDACTED]	595 gms	23 wks	7 min	Extreme Prematurity, Chorioamnionitis
5. [REDACTED]*	454 gms	22 wks	<1 hr	Extreme Prematurity
6. [REDACTED]	430 gms	23 wks	15 days	Extreme Prematurity, Probable Sepsis, Gr. IV ICH, NEC
7. [REDACTED]	520 gms	30 wks	6 days	Triploidy, Severe IUGR
8. [REDACTED]	1843 gms	31 wks	21 min	Thanotrophic Dwarf, Hypoxia
9. [REDACTED]	570 gms	24 wks	4 hrs	Extreme Prematurity, Probable Overwhelming Sepsis
10. [REDACTED]	567 gms	23 wks	2 days	Extreme Prematurity, PIE, Grade IV ICH
11. [REDACTED]*	270 gms	19 wks	5 min	Extreme Prematurity
12. [REDACTED]	865 gms	27 wks	8 days	Prematurity, RDS, IVH, Probable Sepsis
13. [REDACTED]*	150 gms	19 wks	2 min	IVH, Probable Sepsis, Extreme Prematurity

II. TRANSPORT IN - NEONATAL DEATHS -Transported out

1. [REDACTED]**	2520 gms	38 wks	8 days	Double Outlet RV, Single Ventricle, Multiple Cong. Anomalies
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II. TRANSPORTS IN - NEONATAL DEATHS

1. [REDACTED] (OCH)	3600 gms	40 wks	7 days	Severe HIE Uterine Rupture
2. [REDACTED] (AF)	3755 gms	41 wks	1 day	Group B Strep Sepsis
3. [REDACTED] (OCH)	2305 gms	38 wks	1 day	Mec. Aspiration Syndrome, Severe Birth Depression, Pulmonary Hemorrhage, Susp. Overwhelming Sepsis
4. [REDACTED] (AF)	3590 gms	40 wks	7 hrs	Prob. Antenatal Hypoxia, Hypovolemia, DIC, Susp. Sepsis
5. [REDACTED] (AF)	548 gms	23 wks	1 day	Extreme Prematurity, RDS, Birth Depression, PIE, PTX Placental Abrupton, IVH
6. [REDACTED]	512 gms	23 wks	1 day	Extreme Prematurity, RDS, PIE

IV. LATE DEATHS

1. [REDACTED]	940 gms	27 wks	8 months	Premature, Liver Failure
2. [REDACTED]	310 gms	26 wks	32 days	Severe IUGR, Staph Epi Sepsis, Renal Failure, Liver Failure, Gr. III ICH
3. [REDACTED]**	3470 gms	35 wks	6 wks	Pulmonary Lymphangiectasia

* Never admitted to NBICU

** Transported to PCMC and died there

STILLBIRTHS 1996
UTAH VALLEY REGIONAL MEDICAL CENTER

	<u>NAME</u>	<u>WEIGHT</u>	<u>G.A.</u>	<u>DATE</u>
1	██████	709	28	01/05/96
2	██████	1106	29	02/03/96
3	██████	964	29	02/19/96
4	██████	742	39	04/21/96
5	██████	709	28	04/26/96
6	██████	2551	38	06/29/96
7	██████	3118	40	07/11/96
8	██████	2807	38	07/22/96
9	██████	539	27	08/09/96
10	██████	2126	38	08/14/96
11	██████	1276	32	09/28/96
12	██████	3289	39	10/03/96
13	██████*	369	23	04/16/96
14	██████*	283	33	05/23/96
15	██████*	454	22	08/29/96
16	██████*	369	28	04/26/96
17	██████* (twin)	340	21	12/16/96
18	██████* (twin)	283	21	12/16/96

* Included because >20 wks gestation.

**1996 CONGENITAL ANOMALIES
UTAH VALLEY REGIONAL MEDICAL CENTER**

1.	Congenital Heart Defects	13
	• Coarctation of the Aorta	4
	• Ventricular Septal Defect	3
	• Transportation of the Great Vessels	2
	• Tetralogy of Fallot	1
	• Aortic Stenosis	1
	• Atrial septal Defect	1
	• Double Outlet Right Ventricle	1
2.	Trisomy 21	3
3	Multiple congenital Anomalies	3
4.	Gastroschisis	2
5.	Trachea-Esophageal Fistula	2
6	Imperforate Anus	2
7.	Dandy Walker Syndrome	2
8	Myelomeningocele	2
9.	Duodenal Atresia	2
10.	Trisomy 18	
11.	Triploidy	
12.	Thanotrophic Dwarf	
13.	Pulmonary Lymphangiectasis	
14.	Coffin - Siris Syndrome	
15.	Sacroccocygeal Teratoma	
16.	Pierre - Robin Syndrome	
17.	Cleft Palate	
18	Crypt Orchidism	
19.	Hydrocephalus	
20.	Recto - Vaginal Fistula	
Total Major Congenital Anomalies =		42

UVRMC 1997 STATISTICS

INBORN

Total Live Births	4108
Prematures (≤ 37 wks)	590 (14.4%)
LBW (< 2500 gms)	349 (18.5%)
C/Sections	562 (13.7%)
Anomalies	41
Twins	73
Triplets	3
<i>Fetal Deaths > 20 weeks</i>	20
Neonatal Deaths > 500 gms	14
Total Fetal & Neonatal Deaths	34
Total Live Births & Fetal Deaths	4128
Neonatal Deaths Corrected for Malformations	6
Perinatal Deaths (corrected)	26

CALCULATIONS

Neonatal Mortality 14/4108	3.4
Perinatal Mortality 34/4128	8.2
Corrected Neonatal Mortality 6/4108	1.5
Corrected Perinatal Mortality 26/4128	6.3

INTERNATIONAL PERINATAL MORTALITY

Perinatal I

$$\frac{\text{Stillborns} > 1000 \text{ gm} + \text{Deaths First 7 days} > 1000 \text{ gm}}{\text{Stillborns} > 1000 \text{ gm} + \text{All Live Born Infants}} \times 1000 = \frac{10 + 7}{10 + 4108} = 4.1$$

Perinatal II

$$\frac{\text{Fetal Deaths} > 500 \text{ gm} + \text{All Neonatal Deaths}}{\text{Fetal Deaths} > 500 \text{ gm} + \text{All Live Births}} \times 1000 = \frac{16 + 14}{16 + 4162} = 7.2$$

UVRMC STATISTICS 1997				
INBORN STATISTICS				
A. WEIGHT (Gms)	LIVE BIRTHS	STILL BIRTHS	EXPIRED	SURVIVAL %
< 500	10	4*	10	0%
501 - 600	8	1	0	100%
601 - 700	4	2	3	25%
701 - 800	5	3	0	100%
801 - 900	8	0	3	63%
901 - 1000	10	0	1	90%
1001 - 1250	14	2	0	100%
1251 - 1500	15	2	0	100%
1501 - 2000	93	1	5	95%
2001 - 2500	183	2	0	100%
2501 - 3000	587	2	3	99%
3001 - 3500	1600	0	1	99%
3501 - 4000	1212	0	1	99%
> 4001	359	1	0	100%
TOTAL	4108	20	27**	99%
B. GESTATIONAL AGE (Wks)	LIVE BIRTHS	STILL BIRTHS	EXPIRED	SURVIVAL %
< 20	0	0	0	0%
20 - 21	4	2	4	0%
22 - 23	3	3	3	0%
24 - 25	11	1	3	73%
26 - 27	19	2	5	74%
28 - 29	17	2	1	94%
30 - 31	24	2	1	96%
32 - 33	58	3	3	95%
34 - 35	130	2	3	98%
36 - 37	324	1	1	99%
38 - 39	1572	1	2	99%
40 - 42	1940	1	1	99%
> 42	6	0	0	100%
TOTAL	4108	20	27**	99%
C. UVRMC Neonatal Mortality = 3.4 per 1000 live births Perinatal Mortality Rate = 8.2 per 1000 live births Low Birth Weight = 349 (8.5%) Prematures = 590 (14.4%)				

* Stillbirths <500gms but >20 weeks gestation

**These are all deaths, early and late, of patients born at UVRMC in 1997 It includes 8 deaths in Labor and Delivery and 1 death of a patient transported out

UVRMC STATISTICS 1997			
NICU STATISTICS			
A. WEIGHT (Gms)	ADMISSIONS	EXPIRED	SURVIVAL %
< 500	4	4	0%
501 - 600	7	0	100%
601 - 700	5	2	60%
701 - 800	6	0	100%
801 - 900	7	2	71%
901 - 1000	12	1	92%
1001 - 1250	16	0	100%
1251 - 1500	22	0	100%
1501 - 2000	99	5	95%
2001 - 2500	89	0	100%
2501 - 3000	89	3	97%
3001 - 3500	92	1	99%
3501 - 4000	66	0	100%
> 4001	38	0	100%
TOTAL	552	18*	97%
B GESTATIONAL AGE (Wks)	ADMISSIONS	EXPIRED	SURVIVAL %
< 20	0	0	0%
20 - 21	2	2	0%
22 - 23	1	0	100%
24 - 25	12	1	92%
26 - 27	23	5	78%
28 - 29	21	1	95%
30 - 31	26	1	96%
32 - 33	69	2	97%
34 - 35	110	3	97%
36 - 37	78	1	99%
38 - 39	100	2	98%
40 - 42	107	0	100%
> 42	3	0	100%
TOTAL	552	18*	97%
C. NICU Mortality Rate = 3.3%			

*These are all deaths, early and late, which occurred in the NICU at UVRMC. It excludes 8 deaths in Labor and Delivery. It also excludes 1 death of a patient transported to another hospital. Four of these 18 NICU deaths were late deaths.

UTAH VALLEY REGIONAL MEDICAL CENTER
NBICU (SURVIVAL)
1986 - 1997

Birth Weight	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
< 500	1/1 (100%)	0/2 (0%)	0/1 (0%)	2/7 (29%)	0/5 (0%)	1/3 (33%)	1/3 (33%)	0/0 ---	0/1 (0%)	1/3 (33%)	0/3 (0%)	0/4 (0%)
501 - 700	5/9 (55.5%)	0/5 (0%)	4/11 (36%)	7/9 (78%)	2/7 (29%)	4/5 (80%)	4/8 (50%)	4/7 (57%)	5/7 (71%)	6/12 (50%)	5/11 (45%)	10/12 (83%)
701 - 850	7/8 (87.5%)	5/5 (100%)	3/4 (75%)	5/7 (71%)	5/6 (83%)	14/14 (100%)	12/12 (100%)	6/9 (67%)	6/8 (75%)	13/14 (93%)	7/9 (78%)	8/9 (89%)
851 - 1000	6/9 (67.7%)	5/6 (84%)	5/7 (71%)	13/15 (87%)	10/10 (100%)	11/12 (92%)	2/2 (100%)	13/14 (93%)	12/12 (100%)	10/10 (100%)	9/10 (90%)	14/16 (88%)
1001 - 1500	30/35 (86%)	23/25 (92%)	23/24 (96%)	28/30 (93%)	24/27 (89%)	34/35 (97.1%)	35/35 (100%)	38/38 (100%)	39/39 (100%)	38/38 (100%)	55/56 (98%)	38/38 (100%)
1501 - 2000	61/62 (99%)	56/57 (99%)	61/65 (94%)	52/53 (98%)	51/51 (100%)	49/49 (100%)	64/68 (94%)	51/52 (98%)	71/72 (99%)	75/76 (99%)	68/68 (100%)	94/99 (95%)
2001 - 2500	90/94 (96%)	78/78 (100%)	88/91 (97%)	89/90 (99%)	68/69 (99%)	73/74 (98.6%)	56/58 (97%)	75/76 (99%)	53/54 (98%)	73/73 (100%)	77/78 (99%)	89/89 (100%)
> 2501	291/293 (99.99%)	287/289 (99.99%)	298/300 (99.3%)	250/250 (100%)	281/281 (100%)	272/274 (99.3%)	254/257 (98.8%)	238/240 (99%)	248/250 (99%)	216/218 (99%)	261/264 (99%)	281/285 (99%)
	491/511 (96%)	434/467 (92.7%)	482/503 (95.8%)	446/461 (96.7%)	441/456 (96.7%)	458/466 (98.3%)	427/442 (96.6%)	425/436 (97.5%)	434/443 (98%)	432/444 (97%)	482/489 (96.5%)	534/552 (97%)

2001-2000

UTAH VALLEY REGIONAL MEDICAL CENTER STATISTICS

10 YEAR CUMMULATIVE MORTALITY

1986 - 1997

WEIGHT	ADMISSIONS	DEATHS	% MORTALITY
< 500	33	27	82%
501 - 700	103	17	46%
701 - 850	105	14	13%
851 - 1000	123	13	11%
1001 - 1500	420	15	3.6%

UTAH VALLEY REGIONAL MEDICAL CENTER

COMPARATIVE STATISTICS

Inborn (1986 - 1997)

	<u>Live Births</u>	<u>Stillbirths</u>	<u>Deaths</u>	<u>Neonatal Mortality</u>	<u>Perinatal Mortality</u>
1986	4,032	24	22	5.5	11.34
1987	3,590	26	13	2.51	7.77
1988	3,734	15	15	3.75	7.21
1989	3,739	27	17	2.67	9.04
1990	3,862	17	14	2.33	4.91
1991	3,878	12	12	1.81	4.63
1992	3,969	15	14	2.77	6.53
1993	3,872	18	12	2.84	7.46
1994	3,929	9	8	2.04	6.08
1995	3,917	17	9	2.30	6.60
1996	4,162	18	9	2.20	6.40
1997	4,108	20	14	3.40	8.20

UTAH VALLEY REGIONAL MEDICAL CENTER

COMPARATIVE STATISTICS

NBICU (1986 - 1997)

	<u>Admissions</u>	<u>Deaths</u>	<u>Transports</u>	<u>Mortality Rate</u>
1986	511	20	?	3.9%
1987	467	13	100	2.8%
1988	503	21	135	4.2%
1989	461	15	122	3.3%
1990	456	15	113	3.3%
1991	466	8	112	1.72%
1992	442	15	101	3.4%
1993	436	11	118	2.52%
1994	443	9	125	2.03%
1995	444	12	119	2.70%
1996	499	17	132	3.40%
1997	552	18	136	3.30%

NEONATAL DEATHS 1997
UTAH VALLEY REGIONAL MEDICAL CENTER

I. INBORN NEONATAL DEATHS

	<u>NAME</u>	<u>WT</u>	<u>G.A.</u>	<u>AGE@DEATH</u>	<u>DIAGNOSIS</u>
1.	██████	489 gms	23 wks	3 min	Ext. Prematurity
2.	██████	1825 gms	35 wks	3 hrs	Potter's Syndrome
3.	██████	304 gms	21 wks	7 min	Extreme Prematurity
4.	██████	454 gms	22 wks	10 min	Extreme Prematurity, Dwarfism
5.	██████	850 gms	32 wks	8 min	Extreme Prematurity
6.	██████	460 gms	21 wks	21 min	Extreme Prematurity
7.	██████	400 gms	25 wks	13 min	Extreme Prematurity
8.	██████	2920 gms	37 wks	1 hrs	Thanatropic Dwarfism
9.	██████	840 gms	26 wks	8 days	RDS, PIE, Gr. IV IVH, Anasarca
10.	██████	3090 gms	33 wks	7 hrs	Pul. Hypoplasia, Cardiomyopathy Polycystic Kidney Disease
11.	██████	1555 gms	33 wks	40 hrs	CDH, Pul. Hypoplasia, Severe RDS
12.	██████	255 gms	26 wks	18 days	Severe IUGR, Twin-Twin, Multi- organ failure
13.	██████	980 gms	26 wks	2 days	Severe Hydrops, Twin-Twin RDS
14.	██████	356 gms	21 wks	1 hr	Extreme Prematurity, Twin-Twin
15.	██████	259 gms	21 wks	1 hr	Extreme Prematurity, Twin-Twin
16.	██████	497 gms	22 wks	5 min	Extreme Prematurity, Breech, Head Trap
17.	██████	662 gms	25 wks	5 min	Extreme Prematurity, Transverse Lie, No Resuscitation
18.	██████	635 gms	24 wks	22 days	Extreme Prematurity, RDS, Severe Hypoxemia
19.	██████	810 gms	26 wks	27 min	Extreme Prematurity, Severe Birth Depression
20.	██████	2800 gms	38 wks	59 min	Multiple Congenital Anomalies
21.	██████	1956 gms	39 wks	3.5 hrs	Multiple Congenital Anomalies
22.	██████	1560 gms	34 wks	4 days	Triplet, NEC, Bowel Perforation

II. TRANSPORT IN - NEONATAL DEATHS

None

III. TRANSPORT OUT - NEONATAL DEATHS

1.	██████	3805 gms	41 wks	25 days	CDH, Candida Sepsis
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IV. INBORN LATE DEATHS

1.	██████	420 gms	31 wks	42 days	Severe IUGR, Twin-Twin, Multi- organ Failure
2.	██████	3000 gms	34 wks	29 days	Congenital Lymphangiectasia, Pulmonary Hypoplasia, Hydrops
3.	██████	620 gms	27 wks	70 days	Twin-Twin, Yeast Sepsis, NEC with Bowel Perforation, Peritonitis, Severe HIE

V. TRANSPORT IN - LATE DEATHS

1.	██████	1520 gms	29 wks	31 days	Congenital Pulmonary Lymph- Angiectasis, Trisomy 21
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* Never admitted to NBICU

** Transported out for ECMO. Died in Colorado after ECMO.

STILLBIRTHS 1997
UTAH VALLEY REGIONAL MEDICAL CENTER

	<u>NAME</u>	<u>WEIGHT</u>	<u>G.A.</u>	<u>DATE</u>	<u>COMMENT</u>
1.	██████	2618 gms	38 wks	02/06/97	
2.	██████	340 gms	21 wks	02/20/97	Gastroschisis, Ambiguous Genitalia
3.	██████	346 gms	21 wks	02/20/97	Limb-Body Wall Defect
4.	██████	285 gms	23 wks	03/05/97	Anencephalic
5.	██████	1389 gms	31 wks	03/19/97	
6.	██████	268 gms	22 wks	03/20/97	
7.	██████	2208 gms	33 wks	03/25/97	
8.	██████	2608 gms	36 wks	04/11/97	Placental Abruption
9.	██████	511 gms	22 wks	05/21/97	E. Coli Sepsis
10.	██████	1446 gms	33 wks	06/05/97	Massive Placental Infarction
11.	██████	1227 gms	30 wks	06/12/97	Omphalocele
12.	██████	1635 gms	34 wks	06/20/97	
13.	██████	658 gms	26 wks	06/21/97	
14.	██████	750 gms	28 wks	06/19/97	Twin-Twin, Cord Accident
15.	██████	628 gms	28 wks	06/19/97	Twin-Twin, Cord Accident
16.	██████	1138 gms	33 wks	07/21/97	CHD, Isochromosome 18q-Holoprosencephaly
17.	██████	709 gms	27 wks	09/28/97	Encephalocèle, Ectopia Cordis, Club feet, Polyhydramnios
18.	██████	2381 gms	34 wks	09/30/97	Marked Villous Dysmaturity
19.	██████	4366 gms	41 wks	10/27/97	Cord Entanglement
20.	██████	765 gms	25 wks	12/26/97	

Included because >20 wks gestation.

**1997 CONGENITAL ANOMALIES
UTAH VALLEY REGIONAL MEDICAL CENTER**

1.	Gastroschisis	6
2	Dwarfism	3
3	Omphalocele	2
4	Holoprosencephaly	2
5.	Congenital Heart Disease	3
	• Transposition of Great Vessels	
	• Epsteins Anomaly	
	• Hypertropic Cardiomyopathy	
6.	Cleft Lip and Palate	2
7.	Congenital Diaphragmatic Hernia	2
8.	Cong. Pulmonary Lymphangiectasia	2
9.	Hydrops Fetalis	2
10.	Trisomy 18	
11	Trisomy 21	
12	Isochromosome 18q-	
13	Rubenstein Taybi Syndrome	
14	Multiple Skin Defects	
15	Encephalocele	
16.	T-E Fistula	
17	Ectopia Cordis	
18	Anencephaly	
19.	Obstructive Uropathy	
20	Potter's Syndrome	
21.	Pentalogy of Cantrell	
22	Polycystic Kidney Disease	
23	Craniosynostosis	
24.	Arthrogryposis	
Total Major Congenital Anomalies		41

UVRMC 1998 STATISTICS

INBORN

Total Live Births	3748
Prematures (≤ 37 wks)	608 (16.2%)
LBW (< 2500 gms)	361 (9.6 %)
C/Sections	510 (13.6 %)
Anomalies	41
Twins	77
Triplets	5
Fetal Deaths > 20 weeks	19
Neonatal Deaths > 500 gms	6
Total Fetal & Neonatal Deaths	25
Total Live Births & Fetal Deaths	3767
Neonatal Deaths Corrected for Malformations	3
Perinatal Deaths (corrected)	22

CALCULATIONS

Neonatal Mortality 6/3748	1.6
Perinatal Mortality 23/3767	6.6
Corrected Neonatal Mortality 3/3748	0.8
Corrected Perinatal Mortality 22/3767	5.8

INTERNATIONAL PERINATAL MORTALITY

Perinatal I

$$\frac{\text{Stillborns} > 1000 \text{ gm} + \text{Deaths First 7 days} > 1000 \text{ gm}}{\text{Stillborns} > 1000 \text{ gm} + \text{All Live Born Infants}} \times 1000 = \frac{11 + 3}{11 + 3748} = 3.7$$

Perinatal II

$$\frac{\text{Fetal Deaths} > 500 \text{ gm} + \text{All Neonatal Deaths}}{\text{Fetal Deaths} > 500 \text{ gm} + \text{All Live Births}} \times 1000 = \frac{14 + 6}{14 + 3748} = 5.3$$

UVRMC STATISTICS				
INBORN STATISTICS 1998				
A. WEIGHT (gms)	LIVE BIRTHS	STILL BIRTHS	EXPIRED	SURVIVAL %
< 500	7	5*	5	29%
501 - 600	5	1	2	60%
601 - 700	4	1	2	50%
701 - 800	10	0	1	90%
801 - 900	5	0	0	100%
901 - 1000	4	1	0	100%
1001 - 1250	22	0	1	95%
1251 - 1500	30	1	0	100%
1501 - 2000	92	2	2	98%
2001 - 2500	182	5	1	99%
2501 - 3000	612	1	0	100%
3001 - 3500	1392	1	0	100%
3501 - 4000	1078	0	0	100%
> 4001	305	1	0	100%
TOTAL	3748	19	14**	99.6%
B. GESTATIONAL AGE (wks)	LIVE BIRTHS	STILL BIRTHS	EXPIRED	SURVIVAL %
< 20	0	0	0	-
20 - 21	2	1	2	0%
22 - 23	7	4	6	14%
24 - 25	7	1	2	71%
26 - 27	6	3	0	100%
28 - 29	26	1	1	96%
30 - 31	35	0	0	100%
32 - 33	61	1	1	98%
34 - 35	118	3	2	98%
36 - 37	346	3	0	100%
38 - 39	1485	2	0	100%
40 - 42	1653	0	0	100%
> 42	2	0	0	-
TOTAL	3748	19	14**	99.6%
C. UVRMC Neonatal Mortality = 16				
Perinatal Mortality Rate = 6.6				
Low Birth Weight = 361 (9.6%)				
Prematures = 608 (16.2%)				

* Stillbirths < 500 grams but > 20 weeks gestation

** These are all deaths, early and late, of patients born at UVRMC in 1998. It includes 6 deaths in labor and delivery.

UVRMC STATISTICS			
NICU STATISTICS 1998			
A. WEIGHT (Gms)	ADMISSIONS	EXPIRED	SURVIVAL %
< 500	4	2	50%
501 - 600	6	1	83%
601 - 700	5	3	40%
701 - 800	9	0	100%
801 - 900	5	0	100%
901 - 1000	6	0	100%
1001 - 1250	24	0	100%
1251 - 1500	40	0	100%
1501 - 2000	101	3	97%
2001 - 2500	97	1	99%
2501 - 3000	83	1	99%
3001 - 3500	99	1	99%
3501 - 4000	63	0	100%
> 4001	33	0	100%
TOTAL	575	12*	98%
B. GESTATIONAL AGE (Wks)	ADMISSIONS	EXPIRED	SURVIVAL %
< 20	0	0	-
20 - 21	0	0	-
22 - 23	6	3	50%
24 - 25	6	3	50%
26 - 27	10	0	100%
28 - 29	35	1	97%
30 - 31	42	0	100%
32 - 33	70	0	100%
34 - 35	101	3	97%
36 - 37	100	0	100%
38 - 39	114	2	98%
40 - 42	91	0	100%
> 42	0	0	-
TOTAL	575	12*	98%
C. NICU Mortality Rate = 2.1%			

* These are all deaths, early and late, which occurred in the NICU at UVRMC. It excludes 6 deaths in labor and delivery. It also excludes 1 death of a patient transported to another hospital. Four of these 12 deaths were late deaths.

UTAH VALLEY REGIONAL MEDICAL CENTER
NICU (SURVIVAL)
1986 - 1998

Birth Weight	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
< 500	1/1 (100%)	0/2 (0%)	0/1 (0%)	2/7 (29%)	0/5 (0%)	1/3 (33%)	1/3 (33%)	0/0 ---	0/1 (0%)	1/3 (33%)	0/3 (0%)	0/4 (0%)	2/4 (50%)
501 - 700	5/9 (55.5%)	0/5 (0%)	4/11 (36%)	7/9 (78%)	2/7 (29%)	4/5 (80%)	4/8 (50%)	4/7 (57%)	5/7 (71%)	6/12 (50%)	5/11 (45%)	10/12 (83%)	7/11 (64%)
701 - 850	7/8 (87.5%)	5/5 (100%)	3/4 (75%)	5/7 (71%)	5/6 (83%)	14/14 (100%)	12/12 (100%)	6/9 (67%)	6/8 (75%)	13/14 (93%)	7/9 (78%)	8/9 (89%)	12/12 (100%)
851 - 1000	6/9 (67.7%)	5/6 (84%)	5/7 (71%)	13/15 (87%)	10/10 (100%)	11/12 (92%)	2/2 (100%)	13/14 (93%)	12/12 (100%)	10/10 (100%)	9/10 (90%)	14/16 (88%)	8/8 (100%)
1001 - 1500	30/35 (86%)	23/25 (92%)	23/24 (96%)	28/30 (93%)	24/27 (89%)	34/35 (97.1%)	35/35 (100%)	38/38 (100%)	39/39 (100%)	38/38 (100%)	55/56 (98%)	38/38 (100%)	64/64 (100%)
1501 - 2000	61/62 (99%)	56/57 (99%)	61/65 (94%)	52/53 (98%)	51/51 (100%)	49/49 (100%)	64/68 (94%)	51/52 (98%)	71/72 (99%)	75/76 (99%)	68/68 (100%)	94/99 (95%)	98/101 (97%)
2001 - 2500	90/94 (96%)	78/78 (100%)	88/91 (97%)	89/90 (99%)	68/69 (99%)	73/74 (98.6%)	56/58 (97%)	75/76 (99%)	53/54 (98%)	73/73 (100%)	77/78 (99%)	89/89 (100%)	96/97 (99%)
> 2501	291/293 (99.99%)	287/289 (99.99%)	298/300 (99.3%)	250/250 (100%)	281/281 (100%)	272/274 (99.3%)	254/257 (98.8%)	238/240 (99%)	248/250 (99%)	216/218 (99%)	261/264 (99%)	281/285 (99%)	96/96 (100%)
	491/511 (96%)	454/467 (97.2%)	482/503 (95.8%)	446/461 (96.7%)	441/456 (96.7%)	458/466 (98.3%)	427/442 (96.6%)	425/436 (97.5%)	434/443 (98%)	432/444 (97%)	482/489 (96.5%)	534/552 (97%)	563/575 (98%)

2001/200

UTAH VALLEY REGIONAL MEDICAL CENTER STATISTICS

10 YEAR CUMMULATIVE MORTALITY

1986 - 1998

WEIGHT	ADMISSIONS	DEATHS	% MORTALITY
< 500	37	29	78%
501 - 700	114	21	18%
701 - 850	117	14	12%
851 - 1000	131	13	10%
1001 - 1500	484	15	3.1%

UTAH VALLEY REGIONAL MEDICAL CENTER

COMPARATIVE STATISTICS

Inborn (1986 - 1998)

	<u>Live Births</u>	<u>Stillbirths</u>	<u>Deaths</u>	<u>Neonatal Mortality</u>	<u>Perinatal Mortality</u>
1986	4,032	24	22	5.5	11.34
1987	3,590	26	13	2.51	7.77
1988	3,734	15	15	3.75	7.21
1989	3,739	27	17	2.67	9.04
1990	3,862	17	14	2.33	4.91
1991	3,878	12	12	1.81	4.63
1992	3,969	15	14	2.77	6.53
1993	3,872	18	12	2.84	7.46
1994	3,929	9	8	2.04	6.08
1995	3,917	17	9	2.30	6.60
1996	4,162	18	9	2.20	6.40
1997	4,108	20	14	3.40	8.20
1998	3,748	19	6	1.60	6.60

UTAH VALLEY REGIONAL MEDICAL CENTER
COMPARATIVE STATISTICS
NICU (1986 - 1998)

	<u>Admissions</u>	<u>Deaths</u>	<u>Transports</u>	<u>Mortality Rate</u>
1986	511	20	?	3.90%
1987	467	13	100	2.80%
1988	503	21	135	4.20%
1989	461	15	122	3.30%
1990	456	15	113	3.30%
1991	466	8	112	1.72%
1992	442	15	101	3.40%
1993	436	11	118	2.52%
1994	443	9	125	2.03%
1995	444	12	119	2.70%
1996	499	17	132	3.40%
1997	552	18	136	3.30%
1998	575	12	165	2.10%

NEONATAL DEATHS
UTAH VALLEY REGIONAL MEDICAL CENTER
1998

I. Inborn - Neonatal Deaths				
Name	WT (gms)	G.A. (wks)	Age @ Death	Diagnosis
1. [REDACTED]*	709	24	1 hr. 30 min.	Extreme Prematurity
2. [REDACTED]**	576	22	2 min	Extreme Prematurity
3. [REDACTED]	2100	35	1 day	Multiple Lethal Anomalies
4. [REDACTED]	625	23	2 days	Extreme Prematurity
5. [REDACTED]*	345	23	3 hr.	Extreme Prematurity, Sepsis
6. [REDACTED]*	402	23	5 hr.	Extreme Prematurity, Sepsis
7. [REDACTED]	1068	32	6 min.	Multiple lethal Anomalies
8. [REDACTED]**	371	21	2 min.	Extreme Prematurity
9. [REDACTED]**	294	21	2 hrs.	Extreme Prematurity
10. [REDACTED]	1770	34	4 days	Trisomy 18

II. Transport In - Neonatal Deaths				
Name	WT (gms)	G.A. (wks)	Age @ Death	Diagnosis
1. [REDACTED]***	3742	38	5 days	Group B Strep Sepsis (A.F.H.)
2. [REDACTED]	2834	39	17 days	Alveolar Capillary Dysplasia, In Utero Closure of the Ductus Arteriosus. (A.F.H.)
3. [REDACTED]	1800	35	18 hrs	Severe Sepsis syndrome, Air Leak, Pneumonitis (A.F.H.)
4. [REDACTED]	665	24	1 day	Extreme Prematurity Probable Sepsis (A.F.H.)
5. [REDACTED]	500	24	< 1 day	Extreme Prematurity Probable Sepsis (A.F.H.)

III. Inborn - Late Death				
Name	WT (gms)	G.A. (wks)	Age @ Death	Diagnosis
1. [REDACTED]	1510	29	4 mo. 28 days	Desquamative Interstitial Pneumonitis
2. [REDACTED]	600	23	3 mo	Extreme Prematurity ICH, Superior Vena Cava Syndrome
3. [REDACTED]	680	25	3 mo	Extreme Prematurity ICH, Superior Vena Cava Syndrome.
4. [REDACTED]	425	23	33 days	Extreme Prematurity, Respiratory Failure.

* Never admitted to NICU, Patient not resuscitated because of parents wishes.

** Never admitted to NICU

**STILLBIRTHS
UTAH VALLEY REGIONAL MEDICAL CENTER**

1998

Name	Weight (gms)	G.A. (wks)	Date	Comment
1. [REDACTED]	2523	34	02 Jan	Unexplained
2. [REDACTED]	2438	36	19 Jan	Unexplained
3. [REDACTED]	907	29	22 Jan	Cord Accident
4. [REDACTED]	2353	36	25 Jan	Cord Accident
5. [REDACTED]	2381	38	03 Feb	Unexplained
6. [REDACTED]	3047	36	05 Apr	Cord Accident
7. [REDACTED]	431	21	29 Apr	Unexplained
8. [REDACTED]	387	22	19 May	Hydrocephalus, Multiple Anomalies
9. [REDACTED]	≈2000	34	26 May	Cleft Lip & Palate, Congenital Heart Disease, GI Anomalies
10. [REDACTED]	110	27	28 May	Multiple Congenital Anomalies, Duodenal Atresia, Polyhydramnios
11. [REDACTED]	<500	27	19 Jun	IUFD, Twin to Twin, Donor Twin
12. [REDACTED]	1257	23	26 Aug	Turner's Syndrome, Hydrops
13. [REDACTED]	2010	32	4 Sep	Hydropic Fetal Demise from Twin to Twin Transfusion
14. [REDACTED]	1650	34	21 Sep	Short Cord, Premature Separation of Placenta
15. [REDACTED]	4391	39	21 Nov	Cord Around Neck
16. [REDACTED]	605	23	23 Nov	Gastroschisis
17. [REDACTED]	555	23	23 Nov	Cord Entanglement
18. [REDACTED]	1777	25	11 Dec	Thanatophoric Dwarfism
19. [REDACTED]*	279	26	14 Dec	No Autopsy or Chromosomes Done

* Included because > 20 wks gestation.

CONGENITAL ANOMALIES
UTAH VALLEY REGIONAL MEDICAL CENTER
1998

1.	Congenital Heart ASD -3 Coarctation -1 Truncus Arteriosus - 1 Ebstein's Anomalie - 1	6
2	Gastroschisis	5
3	Trisomy 21	4
4	Hypospadias	3
5.	Multiple Congenital Anomalies	3
6.	Cleft lip & Palate	3
7	Amniotic Bands	2
8	Trisomy 18	2
9.	Meningomyelocele	1
10.	Ladd's Bands - Bowel Obstruction	1
11.	Imperforate anus	1
12	Cryptorchidism	1
13	Extrophy of the Bladder	1
14	Hirschsprung Disease	1
15	Velocardiofacial Syndrome	1
16	Tracheal-esophageal Fistula	1
17	Club Feet	1
18	Duodenal Atresia	1
19	Turner's Syndrome	1
20	Thanatophoric Dwarfism	1
21	Achondroplasia	1

Neonatal Transport
Utah Valley Regional Medical Center
1998

IN FROM		
1	A.F.H	34
2.	OCH	26
3.	Payson	14
4	Cedar City	11
5.	Timpanogos	11
6	PCMC	9
7.	Roosevelt	8
8.	Mt Pleasant	8
9.	Delta	7
10.	Nephi	5
11	Gunnison	5
12	Beaver	5
13.	Richfield	5
14	St George	5
15	Price	5
16	Vernal	3
17.	Univ. of UT	2
18	Heber	2
19	LDS	1
20.	Milford	1
21.	Cottonwood	1
22	Fillmore	1
	Total	165

OUT TO		
1.	PCMC	29
2.	Cottonwood	1
3.	St. George	1
4.	Logan Regional	1
5	Payson	1
6.	Cedar	1
	Total	34

UVRMC 1999 STATISTICS

INBORN

Total Live Births	4092
Prematures (≤ 37 wks)	654 (16%)
LBW (< 2500 gms)	374 (9.1 %)
C/Sections	606 (14.8 %)
Anomalies	35
Twins	84
Triplets	3
Fetal Deaths > 20 weeks	27
Neonatal Deaths > 500 gms	9
Total Fetal & Neonatal Deaths	36
Total Live Births & Fetal Deaths	4119
Neonatal Deaths Corrected for Malformations	6
Perinatal Deaths (corrected)	33

CALCULATIONS

Neonatal Mortality 9/4092	2.2
Perinatal Mortality 36/4119	8.7
Corrected Neonatal Mortality 6/4092	1.5
Corrected Perinatal Mortality 33/4119	8.0

INTERNATIONAL PERINATAL MORTALITY

Perinatal I

$$\frac{\text{Stillborns} > 1000 \text{ gm} + \text{Deaths First 7 days} > 1000 \text{ gm}}{\text{Stillborns} > 1000 \text{ gm} + \text{All Live Born Infants}} \times 1000 = \frac{12 + 2}{12 + 4092} = 3.4$$

Perinatal II

$$\frac{\text{Fetal Deaths} > 500 \text{ gm} + \text{All Neonatal Deaths}}{\text{Fetal Deaths} > 500 \text{ gm} + \text{All Live Births}} \times 1000 = \frac{18 + 9}{18 + 4092} = 6.6$$

UVRMC STATISTICS				
INBORN STATISTICS 1999				
A. WEIGHT (gms)	LIVE BIRTHS	STILL BIRTHS	EXPIRED	SURVIVAL %
< 500	7	9*	6	14%
501 - 600	2	0	0	100%
601 - 700	7	3	4	43%
701 - 800	6	0	1	83%
801 - 900	8	2	2	75%
901 - 1000	8	2	1	88%
1001 - 1250	21	1	1	95%
1251 - 1500	28	1	0	100%
1501 - 2000	85	3	1	99%
2001 - 2500	202	0	1	99%
2501 - 3000	623	4	0	100%
3001 - 3500	1567	1	0	100%
3501 - 4000	1186	0	0	100%
> 4001	342	1	0	100%
TOTAL	4092	27	17**	99.6%
B. GESTATIONAL AGE (wks)	LIVE BIRTHS	STILL BIRTHS	EXPIRED	SURVIVAL %
< 20	0	0	0	-
20 - 21	4	2	4	0%
22 - 23	3	5	3	0%
24 - 25	10	2	5	50%
26 - 27	15	4	2	87%
28 - 29	25	0	1	96%
30 - 31	33	3	0	100%
32 - 33	56	2	0	100%
34 - 35	140	2	1	99%
36 - 37	370	4	1	99.7%
38 - 39	1678	2	0	100%
40 - 42	1733	1	0	100%
> 42	5	0	0	100%
TOTAL	4092	27	17**	99.6%
C. UVRMC Neonatal Mortality = 2.2				
Perinatal Mortality Rate = 8.7				
Low Birth Weight = 374 (9.1%)				
Prematures = 654 (16%)				

* Stillbirths < 500 grams but > 20 weeks gestation.

** These are all deaths, early and late, of patients born at UVRMC in 1999. It includes 6 deaths in labor and delivery.

UVRMC STATISTICS			
NICU STATISTICS 1999			
A. WEIGHT (Gms)	ADMISSIONS	EXPIRED	SURVIVAL %
< 500	3	2	33%
501 - 600	5	0	100%
601 - 700	8	5	38%
701 - 800	10	1	90%
801 - 900	10	1	90%
901 - 1000	14	3	79%
1001 - 1250	30	0	100%
1251 - 1500	37	0	100%
1501 - 2000	90	1	99%
2001 - 2500	83	1	99%
2501 - 3000	95	0	100%
3001 - 3500	76	0	100%
3501 - 4000	56	0	100%
> 4001	26	0	100%
TOTAL	543	14*	97%
B. GESTATIONAL AGE (Wks)	ADMISSIONS	EXPIRED	SURVIVAL %
< 20	0	0	-
20 - 21	0	0	-
22 - 23	4	4	0%
24 - 25	15	6	60%
26 - 27	26	1	96%
28 - 29	35	0	100%
30 - 31	40	1	98%
32 - 33	66	0	100%
34 - 35	97	1	99%
36 - 37	105	1	99%
38 - 39	85	0	100%
40 - 42	69	0	100%
> 42	1	0	100%
TOTAL	543	14*	97%
C. NICU Mortality Rate = 2.6%			

* These are all deaths, early and late, which occurred in the NICU at UVRMC. It excludes 6 deaths in labor and delivery. It also excludes 2 deaths of patients transported to PCMC.

UTAH VALLEY REGIONAL MEDICAL CENTER
NICU (SURVIVAL)
1986 - 1999

Birth Weight	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
< 500	1/1 (100%)	0/2 (0%)	0/1 (0%)	2/7 (29%)	0/5 (0%)	1/3 (33%)	1/3 (33%)	0/0 —	0/1 (0%)	1/3 (33%)	0/3 (0%)	0/4 (0%)	2/4 (50%)	1/3 (33%)
501 - 700	5/9 (55.5%)	0/5 (0%)	4/11 (36%)	7/9 (78%)	2/7 (29%)	4/5 (80%)	4/8 (50%)	4/7 (57%)	5/7 (71%)	6/12 (50%)	5/11 (45%)	10/12 (83%)	7/11 (64%)	8/13 (62%)
701 - 850	7/8 (87.5%)	5/5 (100%)	3/4 (75%)	5/7 (71%)	5/6 (83%)	14/14 (100%)	12/12 (100%)	6/9 (67%)	6/8 (75%)	13/14 (93%)	7/9 (78%)	8/9 (89%)	12/12 (100%)	13/15 (87%)
851 - 1000	6/9 (67.7%)	5/6 (84%)	5/7 (71%)	13/15 (87%)	10/10 (100%)	11/12 (92%)	2/2 (100%)	13/14 (93%)	12/12 (100%)	10/10 (100%)	9/10 (90%)	14/16 (88%)	8/8 (100%)	16/19 (84%)
1001 - 1500	30/35 (86%)	23/25 (92%)	23/24 (96%)	28/30 (93%)	24/27 (89%)	34/35 (97.1%)	35/35 (100%)	38/38 (100%)	39/39 (100%)	38/38 (100%)	55/56 (98%)	38/38 (100%)	64/64 (100%)	67/67 (100%)
1501 - 2000	61/62 (99%)	56/57 (99%)	61/65 (94%)	52/53 (98%)	51/51 (100%)	49/49 (100%)	64/68 (94%)	51/52 (98%)	71/72 (99%)	75/76 (99%)	68/68 (100%)	94/99 (95%)	98/101 (97%)	89/90 (90%)
2001 - 2500	90/94 (96%)	78/78 (100%)	88/91 (97%)	89/90 (99%)	68/69 (99%)	73/74 (98.6%)	56/58 (97%)	75/76 (99%)	53/54 (98%)	73/73 (100%)	77/78 (99%)	89/89 (100%)	96/97 (99%)	82/83 (99%)
> 2501	291/293 (99.99%)	287/289 (99.99%)	298/300 (99.3%)	250/250 (100%)	281/281 (100%)	272/274 (99.3%)	254/257 (98.8%)	238/240 (99%)	248/250 (99%)	216/218 (99%)	261/264 (99%)	281/285 (99%)	96/96 (100%)	253/253 (100%)
	491/511 (96%)	454/467 (97.2%)	482/503 (95.8%)	446/461 (96.7%)	441/456 (96.7%)	458/466 (98.3%)	427/442 (96.6%)	425/436 (97.5%)	434/443 (98%)	432/444 (97%)	482/489 (96.5%)	534/552 (97%)	563/575 (98%)	529/543 (97%)

UTAH VALLEY REGIONAL MEDICAL CENTER STATISTICS

13 YEAR CUMULATIVE MORTALITY

1986 - 1999

WEIGHT	ADMISSIONS	DEATHS	% MORTALITY
< 500	40	31	78%
501 - 700	127	26	20%
701 - 850	132	16	12%
851 - 1000	150	16	11%
1001 - 1500	551	15	2.7%

UTAH VALLEY REGIONAL MEDICAL CENTER

COMPARATIVE STATISTICS

Inborn (1986 - 1999)

	<u>Live Births</u>	<u>Stillbirths</u>	<u>Deaths</u>	<u>Neonatal Mortality</u>	<u>Perinatal Mortality</u>
1986	4,032	24	22	5.5	11.34
1987	3,590	26	13	2.51	7.77
1988	3,734	15	15	3.75	7.21
1989	3,739	27	17	2.67	9.04
1990	3,862	17	14	2.33	4.91
1991	3,878	12	12	1.81	4.63
1992	3,969	15	14	2.77	6.53
1993	3,872	18	12	2.84	7.46
1994	3,929	9	8	2.04	6.08
1995	3,917	17	9	2.30	6.60
1996	4,162	18	9	2.20	6.40
1997	4,108	20	14	3.40	8.20
1998	3,748	19	6	1.60	6.60
1999	4,092	27	9	2.20	8.70

UTAH VALLEY REGIONAL MEDICAL CENTER
COMPARATIVE STATISTICS
NICU (1986 - 1999)

	<u>Admissions</u>	<u>Deaths</u>	<u>Transports</u>	<u>Mortality Rate</u>
1986	511	20	?	3.90%
1987	467	13	100	2.80%
1988	503	21	135	4.20%
1989	461	15	122	3.30%
1990	456	15	113	3.30%
1991	466	8	112	1.72%
1992	442	15	101	3.40%
1993	436	11	118	2.52%
1994	443	9	125	2.03%
1995	444	12	119	2.70%
1996	499	17	132	3.40%
1997	552	18	136	3.30%
1998	575	12	165	2.10%
1999	543	14	176	2.60%

DMS44

STILLBIRTHS
UTAH VALLEY REGIONAL MEDICAL CENTER

1999

Name	Weight (gms)	G.A. (wks)	Date	Comment
1 [REDACTED]	1555	34	11 Jan	Abruption of Placenta
2 [REDACTED]	1871	37	21 Jan	Trisomy 21, VSD
3 [REDACTED]	2810	37	22 Jan	Acute Asphyxiation
4 [REDACTED]*	305	22	29 Jan	Bilateral Renal Agenesis
5 [REDACTED]	1000	25	13 Apr	Polyhydramnios, Twin to Twin Transfusion
6 [REDACTED]	1775	32	22 Apr	Severe Twisting of Umbilical Cord
7 [REDACTED]*	257	21	27 Apr	Severe Preeclampsia of Mother
8 [REDACTED]	4006	41	02 May	Cord Around Neck, Premature Separation of Placenta
9 [REDACTED]*	401	22	10 May	Cerclage for Incompetent Cervix, IUFD @ 20 wks with Spontaneous Abortion
10 [REDACTED]	692	23	15 May	Multiple Dysmorphic Features
11 [REDACTED]	2693	37	20 May	Cord Around Neck with Compression
12 [REDACTED]*	174	30	20 May	Severe IUGR (Twin B), Placental Infarct-Obstruction of Fetal Blood Flow
13 [REDACTED]	2847	38	11 Jun	Acute Asphyxial Death/Vascular Compromise
14 [REDACTED]	3193	39	15 Jun	Cord Entanglement/Premature Separation of Placenta
15 [REDACTED]	869	26	20 Aug	Herpetic Septicemia, Maternal Listeriosis
16 [REDACTED]	904	32	25 Aug	Degeneration and Funisitis of Umbilical Cord
17 [REDACTED]	645	27	17 Sep	Polyhydramnios, Severe Pulmonary Hypoplasia
18 [REDACTED]	660	30	20 Sep	Numerous Placental Infarcts
19 [REDACTED]*	116	24	10 Oct	Aneuploidy (13 to 9 Translocation)
20 [REDACTED]*	473	26	17 Oct	Premature Separation of Placenta
21 [REDACTED]	842	27	28 Oct	Cord Entanglement
22 [REDACTED]*	141	22	11 Nov	Infarction at Base of Cord Insertion
23 [REDACTED]	1138	34	12 Nov	Placental Infarction with Hemorrhage

Name	Weight (gms)	G.A. (wks)	Date	Comment
24. [REDACTED]	2722	37	17 Nov	Premature Abrupton of Placenta
25. [REDACTED]*	Not Recorded	21	21 Nov	Streptococcus Infection, Group B
26. [REDACTED]*	Not Recorded	22	24 Nov	Encephalocele, Multiple Anomalies
27. [REDACTED]	1283	31	5 Dec	Acute Asphyxiation Due to entrapment of Non-coiled Umbilical Cord

* Included because >20 wks gestation

NEONATAL DEATHS
UTAH VALLEY REGIONAL MEDICAL CENTER
1999

I. Inborn - Neonatal Deaths				
Name	WT (gms)	G.A. (wks)	Age @ Death	Diagnosis
1. [REDACTED]*	1166	27	1 hr.	Renal Agenesis, Pulmonary Hypoplasia
2. [REDACTED]	650	24	14 days	Extreme Prematurity, grade II-III ICH, Occipital Lobe Infarction, Yeast Sepsis
3. [REDACTED]	455	23	1 hr.	Extreme Prematurity
4. [REDACTED]	675	25	11 hours	Extreme Prematurity, Probable factor IX deficiency
5. [REDACTED]*	820	29	1 hr.	Trisomy 18
6. [REDACTED]	447	25	7 hrs	Extreme Prematurity, Sepsis
7. [REDACTED]*	255	21	3.5 hrs.	Extreme Prematurity
8. [REDACTED]*	325	21	3 hrs.	Extreme Prematurity
9. [REDACTED]*	344	21	2.5 hrs.	Extreme Prematurity
10. [REDACTED]*	324	21	2 hrs.	Extreme Prematurity
11. [REDACTED]	615	23	2 hrs	Septic Shock, Candida Sepsis
12. [REDACTED]	830	25	12 days	Extreme Prematurity, Pseudomonas Sepsis, Pneumonia
13. [REDACTED]	2386	36	4.3 hrs.	VATER Association, Hypoplastic Lungs
14. [REDACTED]	780	25	1.75 hrs.	Extreme Prematurity, Congenital Sepsis, Probable Myotonic Dystrophy
15. [REDACTED]	640	23	10 hrs.	Extreme Prematurity, E Coli Sepsis, Prolapsed Cord

* Never admitted to NICU

II. Transport In - Neonatal Deaths				
Name	WT (gms)	G.A. (wks)	Age @ Death	Diagnosis
1. [REDACTED]**	658	23	18 hrs	Severe Prematurity, Birth Asphyxia
2. [REDACTED]**	955	30	4 days	Pseudomonas Sepsis

** Transports from Ashley Valley Medical Center in Vernal, Utah

NEONATAL DEATHS
UTAH VALLEY REGIONAL MEDICAL CENTER
1999 (cont)

III. Inborn - Late Deaths				
Name	WT (gms)	G.A. (wks)	Age @ Death	Diagnosis
1 [REDACTED]	1845	34	32 days	Multiple Malformations, Dextrocardia, BVH, VSD, Mitochondrial Abnormality
2 [REDACTED]	988	26	4 ½ mo	Cystic BPD, Suspected in utero viral infection

IV. Transported In - Late Deaths				
Name	WT (gms)	G.A. (wks)	Age @ Death	Diagnosis
1 [REDACTED] ***	1000	26	45 days	Chronic Cystic, Irreversible Lung Disease
2 [REDACTED] ****	1565	37	16 days	Arthrogryposes, Micro Cytopenia, Multiple Congenital Anomalies
3 [REDACTED] ****	1208	27	60 days	Severe Cystic Lung disease Multi-organ failure

*** Transported from AFH

**** Died at PCMC

CONGENITAL ANOMALIES
UTAH VALLEY REGIONAL MEDICAL CENTER
1999

1.	Congenital Heart ASD - 1 Dextrocardia, BVH - 1 Tectology of Fallot - 1 Double Outlet of Right Ventricle - 1 Ventricular Septal Defect - 2	6
2	Cleft lip & Palate	5
3.	Trisomy 21	4
4	Trisomy 18	3
5.	Multiple Congenital Anomalies	2
6	Gastroschisis	2
7	Hydrocephalus	2
8	Pulmonary Hypoplasia	1
9	Obstructive Uropathy	1
10	Meningomyelocele*	1
11	Imperforate anus	1
12	Tracheal-esophageal Fistula	1
13	VATER Association	1
14	Spina Bifida	1
15	Peter's Anomaly	1
16	Microcephaly	1
17	Potter's Syndrome	1
18	Deletion 4P Syndrome	1

*Repaired in Utero

Neonatal Transport
Utah Valley Regional Medical Center
1999

IN FROM		
1.	A.F.H.	33
2.	OCH	24
3	Gunnison	13
4.	Payson	12
5.	Richfield	12
6.	PCMC	9
7.	Vernal	9
8.	Mt. Pleasant	8
9.	Timpanogos	8
10.	Price	8
11	Cedar City	7
12.	St. George	7
13	Roosevelt	4
14.	Kanab	3
15	Delta	2
16.	Beaver	2
17.	Univ. of UT	2
18.	Heber	2
19.	Jordan (West Jordan)	2
20.	Panguitch	2
21	Pioneer Valley (West Valley)	1
22	Alta View (Sandy)	1
23	Las Vegas	1
24.	LDS (SLC)	1

25.	Logan	1
26.	Cottonwood	1
27.	Fillmore	1
	Total	176

OUT TO		
1.	PCMC	29
2.	Vernal	1
3.	St. George	1
	Total	31

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