ONE "MATERNITY'S" STATISTICS

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A PREVIOUS report of the obstetrical department of the Portland Sanitarium for the calendar year 1926 aroused sufficient interest among the staff members to warrant another survey of the subject covering, in addition, the work for years 1927 and 1928.

A conscientious effort has been made to treat the subject fairly and critically in the hope that difficulties and mistakes may be overcome and the results thereby improved.

It soon became evident that while the volume of cases for each of the three years was approximately the same, the number of maternal and fetal deaths showed a progressive decrease. This fact prompted a tabulation by years and reflects a decided statistical improvement.

MATERNAL MORTALITY

Year	Total Cases	Maternal Deaths
1926	479	4 or 0.84%— 8 per 1000
1927	506	3 or 0.59%— 6 per 1000
1928	458	2 or 0.44%— 4 per 1000

FETAL MORTALITY

Year	Total Cases	Fetal Deaths
1926	479	32 or 6.68%—67 per 1000
1927	506	29 or 5.73%—57 per 1000
1928	463	11 or 2.37%—24 per 1000

It must be remember that Portland Sanitarium, being a general hospital with an open staff, receives a certain number of emergency cases, and that obstetrical work cannot be absolutely standardized; also, that even under ideal obstetrical conditions there is bound to be a certain irreducable minimum of obstetrical and fetal deaths. It would seem that we have been most fortunate, especially in 1928, and it may be many years before we again reach these extremely low mortality percentages, shown in the following table:

Year—	1926	1927	1928
Number of Deliveries	479	506	458
Obstetrical Mortality	0.42%	0.59%	0.44%
Medical Mortality	0.42%	0	0
Total Mortality	0.84%	0.59%	0.44%

Theoretically, post-partum hemorrhage deaths should be eliminated. The cases are usually desperate ones that demand heroic treatment. Perhaps the most frequent error is in not realizing the critical condition of the patient and properly combatting shock by saline, glucose or blood intravenously before it is too late.

It would seem that deaths from sepsis should be preventable, but when we consider that the one in 1926 was secondary to a sinus infection which developed several days following delivery by Caesarean section, while that in 1928 was considered an aftermath of recent "flu," it must be admitted that an occasional death from such causes is inevitable.

The ruptured uterus case recorded in 1927 is not correctly charged to the hospital service, as the case was conducted in the home, where rupture occurred and was diagnosed by a consultant who rushed the patient to the hospital in the hope of being able to treat the patient by laparotomy. However, she was moribund upon admission and no treatment was possible. Fortunately, the pituitrin was not administered by a member of this staff. This case is an excellent example of when NOT to use pituitrin.

OBSTETRICAL DEATHS

Year—	1926	1927	1928
Sepsis	1	0	1
Post-Partum Hemorrhage	1	1	1
Embolism (Pulmonary-A. P.	0	1	0
Ruptured Utterus (Protracted Labor-Pit.)	0	1	0
Total	2	3	2

MEDICAL DEATHS

Year—	1926	1927	1928
Pneumonia (Ante-partum..)	1	0	0
Cardiac Disease	1	0	0
Total	2	0	0

It is interesting to recall that while attention was directed to a fetal and maternal death from prolonged attempts at high-forceps delivery in the 1926 report, this formidable operation was entirely absent in the 1927 and 1928 reports.

Percentage of autopsy reports shows a very gratifying increase, there being none in 1926, 66 and 2/3 in 1927 and 100 per cent in 1928.

For purposes of this classification, fetal deaths have been divided into nonviable, premature and full-term cases. All fetuss of less than 28 weeks, weighing under 3¼ lbs., are considered nonviable, and even though respiratory efforts are present, little hope of survival is held. Those from 28 to 38 weeks are regarded as premature, and a reasonable percentage of these babies should, under proper management, survive and develop into healthy babies. Pregnancies from 38 to 40 weeks are considered full term.

Stillbirths include all cases in which there is no respiratory effort. Babies that have spontaneous respiratory movement and expire immediately, or at any time during the first ten-day period, are spoken of as new-born deaths.

	1926	1927	1928
Stillbirths	25 (5.1%)	24 (4.7%)	6 (1.3%)
Newborn deaths	7 (1.5%)	5 (1.0%)	5 (1.07%)
Fetal deaths	32 (6.6%)	29 (5.7%)	11 (2.37%)
Non-Viable Babies	6	6	3
Corrected Fetal Mortality	26 (5.63%)	23 (4.54%)	8 (1.72%)

In the classification of fetal deaths, there is a more or less constant or expected mortality for the toxemias, placental bleeding, and mal-formation groups. Conservative obstetrical practice gives the most consistently low mortality figures in the management of these complications.

However, it is the groups shown as labor and delivery deaths that conscientious care will effect the greatest improvement.

The individual case should be more closely observed during labor. Recordings of fetal heart rates should be more faithfully made and more intelligently interpreted.

Protracted labors, and especially needlessly drawn-out second stages, allow too much trauma to the fetal head. This can readily be detected by close observation of the fetal heart rates. Let me again emphasize the danger of pituitrin and call attention to the two cases classed as pituitrin deaths. DeLee's practice of restricting pituitrin entirely to the third or placental stage is much the safest course to follow.

Another gratifying improvement is the gradual decrease in the practice of inducing labor by rupture of the membranes. I have always regarded this as a dangerous practice, and feel that several cases were distinctly aggravated by this practice. There were none occurring in the 1928 series.

The mortality seems unnecessarily high for breech deliveries. Diagnosis should be made earlier, and at least an attempt at external version before the onset of labor, is desirable. An accepted mortality of 20 per cent for primipara breech deliveries concedes these to be very formidable cases, but 60 per cent is far too high, and is certainly a fertile field for improvement on this service.

Percentage of fetal autopsies has not kept pace with the maternal, for it was only 3.12 per cent in 1926, 10.34 per cent in 1927 and 9.09 in 1928. It should be remembered that autopsy reports should accompany all macerated stillborns, as well as new-born deaths. Often valuable information that may have an important bearing on subsequent pregnancies may be secured.

It is hoped that yearly tabulation may be continued for purposes of comparison.

The new obstetrical wing affords physical facilities which should inspire us to better obstetrics and accomplish lower mortality percentages.

STATISTICAL REPORT: MATERNAL —NEWBORN—STILLBORN—DEATHS

CAUSE FETAL DEATHS, 1926-1927-1928—PORTLAND SANITARIUM

(Chart made by Dr. E. P. Steinmetz)

	1926	1927	1928		Non-Viable Less 28 Weeks 3½ Pounds 1926	1927	1928	Premature 28-38 Weeks 1926	1927	1928	Full Term 1926	1927	1928	Total	%
				Nephritic Toxemia	2	0	0	1	0	0	1	2	0	6	0.41
				Eclampsia	0	0	1	1	0	0	0	1	0	3	0.20
Toxemia	8	5	2	Unclassified	1	0	1	1	0	0	0	2	0	5	0.34
				Acute Infection	0	0	0	1	0	0	0	0	1	2	0.13
Placental Bleeding	3	5	1	Placenta Previa	0	4	0	0	0	0	0	0	0	4	0.27
				Premature Separation of Placenta	2	0	1	1	1	0	0	0	0	5	0.34
				Asphyxia	0	0	0	0	0	0	0	1	1	2	0.13
Labor				Pituitrin Deaths	0	0	0	0	1	0	0	1	0	2	0.13
Deaths	1	5	1	Artificial Rupture of Membranes	0	0	0	0	0	0	1	2	0	3	0.20
				Forceps Delivery	0	0	0	0	0	0	3	2	0	5	0.34
				Breech Delivery	0	1	0	1	1	3	2	2	1	10	0.69
				Version Delivery	0	0	0	0	1	0	0	0	1	2	0.13
				Caesarean Section (Poro following high forceps)	0	0	0	0	0	0	1	0	0	1	0.069
Delivery				Spontaneous Delivery	0	0	0	3	1	0	3	1	0	8	0.55
Deaths	16	12	6	Face Presentation	0	0	0	0	0	0	1	0	0	1	0.069
				Craniotomy, following attempts of forceps delivery	0	0	0	0	0	0	2	1	0	3	0.20
				Precipitate Labor	0	0	0	0	1	0	0	1	0	2	0.13
				Accidental Premature Labor	0	0	1	0	0	0	0	0	0	1	0.069
				Spina Bifida	0	0	0	0	0	0	1	0	0	1	0.069
Malformations	3	0	1	Hydrocephalous and Spina Bifida	0	0	0	0	0	1	0	0	0	1	0.069
				Anencephalic Monster	0	0	0	1	0	0	0	0	0	1	0.069
				Deformity not classified	1	0	0	0	0	0	0	0	0	1	0.069
Prolapsed Cord	1	2	0		0	1	0	0	1	0	1	0	0	3	0.20
Totals	32	29	11		6	6	2	10	7	4	16	16	4	72	4.97

TOTAL BIRTHS

1926	479
1927	506
1928	463
	1448

DEATHS

32	6.68%
29	5.73%
11	2.37%
72	4.83%

OBSTETRICAL DEATHS	1926	1927	1928
Septis	1	0	1
Post-Partum Hemorrhage	1	1	1
Embolism (Pulmonary)	0	1	0
Ruptured Uterus (Pituitrin 1cc Rep)	0	1	0
Total	2	3	2
Total Patients	479	506	458
Obstetrical Mortality	0.42	0.59	0.44
Medical	0.42	0	0
Total Mortality, 1,443	0.84	0.59	0.44

MEDICAL DEATHS	1926	1927	1928
Pneumonia (Ante P)	1	0	0
Cardiac Disease	1	0	0
	2	0	0
Medical	0.42	%	0