



# A Data Collection System for Cleft Lip and Palate: I. Surgical Evaluation

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There have been numerous attempts to classify clefts of the lip, alveolus and palate (1, 2, 3). To avoid becoming cumbersome, however, general classification systems omit detail essential to the accurate description of individual variations. Previous classifications, for instance, have ignored entire areas such as the nose, which, often being involved, must be included. Furthermore, no two clefts are identical and treatment must be modified constantly to deal adequately with such variation. Thus it is essential, for a *scientific evaluation of the final effects of specific therapy*, to record a detailed base line before treatment is begun and to maintain as well a careful periodical re-evaluation.

In a comprehensive longitudinal study of the individual with a cleft now in progress at the South Florida Cleft Palate Clinic, data collection forms are being developed in the various areas of interest. These forms have the dual function of providing research information as well as clinical orientation for the examiner. In addition, the forms are designed so that information from them is readily transferable for computer handling. At the present time, the recorded data can be transferred directly to punch cards and, with slight modification, these forms could be adapted for optical scanners. The use of the high speed electronic computer for data storage, retrieval, and analysis will make possible the investigation of many complex interrelationships which have eluded us in the past.

In this program, three forms have been developed for use by the plastic surgeon. These consist of a) an Initial (Pre-operative) Record, b) a Continuing Evaluation (for all post-operative patients), and c) a Report of Surgery Performed. (The three forms are presented at the end of this paper.)

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**Validation**

At first sight these forms may seem laboriously extensive, but it is surprising how quickly they can be completed and how simply and effectively they serve as data collectors once the examiner has become familiar with the mechanics of the form. The forms have been developed and tested over the past three years. During that time they have been used, in various revisions, for the examination of several hundred patients. In addition, efforts have been made to determine reliability and validity of several items on the forms. These efforts have involved seven surgeons and forty-seven patients. Each patient was examined by two or more surgeons working independently of each other during the same clinic visit. The evaluations recorded by each surgeon were then tabulated and compared, item by item. The results which we are reporting at the present time refer only to the form for Surgical Evaluation. The number of unoperated patients examined during this validation study (six) was too small a basis for a report on the Initial Record. However, many of the judgments required by both the Initial Record form and the Surgical Evaluation form are similar and it seems reasonable to assume that whatever pattern would emerge from a study of the responses to one form could be expected to apply to the other. The Report of Surgery Performed is to be used by the operating surgeon and entered into the patient's history. It therefore does not lend itself very well to the validation procedures described here. We also expect that this

TABLE 1. Percentage of agreement for a number of items from the Surgical Evaluation form.

% of agreement	# of items	item number (Surgical Evaluation form)						
		Nose	Upper lip	Lower lip	Alveolus	Hard palate	Soft palate	Oropharynx
100	8	1a	1b, 5, 9		2a, 2c(1)		1a, 6	
90-99	14	1b, 7, 9b	1a	1	1a, 3b, 4	1a, 2, 4a	1c, 1e, 3	
80-89	14	3, 8	1a		2b, 2c(2), 2c(3), 3a	1b	2, 1b, 1f	
70-79	11	2a, 4, 6, 9a, 10, 11	6, 7, 11		1b		1d	
60-69	3						4, 7	1
50-59	1		8					
40-49	1						5	

TABLE 2. Items from the Surgical Evaluation form on which there was less than 80% agreement.

<i>nose</i>	
item 3: Alar cartilage dislocation at tip.	
Agreement on presence	84%
Agreement on severity	42%
<i>upper lip</i>	
item 4: Notching.	
Agreement on presence	82%
Agreement on areas involved	57%
item 8: Muscle function.	
Complete agreement	54%
All disagreements are within one point difference on rating scale.	
<i>soft palate</i>	
item 1b: Judgment of congenital shortness.	
Agreement	75%
item 4: Adequacy of length.	
Agreement on presence or absence of adequacy	88%
Agreement on severity	67%
item 5: Assessment of levator activity.	
Complete agreement	45%
item 7: Scarring.	
Complete agreement	62%
(All disagreements for items 5 and 7 were one point apart on the rating scale.)	
<i>oropharynx</i>	
item 1: Rating of velopharyngeal closure.	
Complete agreement	67%

(This is a rating of speech by the plastic surgeon. The inference that a more objective test was needed has prompted the addition of the mirror test for nasal emission to the evaluation. More definitive evaluation in this area is in the province of the speech pathologist.)

form would be the one most subject to amendment as newer surgical procedures are perfected and gain wider usage.

Agreements on various items appearing in the Surgical Evaluation form are presented in Table 1.

It seems apparent that many of the judgments which the plastic surgeon must make are necessarily subjective and are the products of his prior training, experience, and level of his standards. Complete agreement on all the items could not then be expected and would indeed be highly suspect of either collaboration by the examiners or failure of the form to require significant judgments. The relatively high degree of agreement indicated above was gratifying. Agreement of 80% or more was reached on 69% of the 52 items on which a sufficient number of judgments had been made to justify the reporting of results.

A detailed study of the items on which there was less than 80% agreement revealed that, at times, a high level of agreement could be reached

on the presence or absence of a specific abnormality, but not on its severity. It was also difficult to reach agreement on judgments of function. The areas presenting these difficulties are reported in Table 2.

The Surgical Evaluation form presented here represents the most recent revision as a result of the study being reported. It contains four items which are new and therefore have not been validated. They are: nose, items 2b, 2c, and 5; and alveolus, item 2c (4).

It is important to note that in order to obtain the maximum utility in the use of these forms, the directions given must be followed carefully and all items must be checked as indicated. This is especially critical if the forms are to be used for data processing in the near or distant future.

### Summary

A clinical evaluation system for the use of the plastic surgeon has been presented. The format permits the use of this system for data collection purposes and is designed so that it is amenable to data processing. These forms have been tested clinically and a satisfactory degree of reliability has been obtained. The forms, as presented here, incorporate changes which have been suggested as a result of the clinical trials. They are now available for use by other centers with the hope that they may serve as a basis for the evolution of a more standardized system of evaluating the cleft lip/palate individual. Other forms for use by other specialties are in the process of development. They follow a similar format so that they can be incorporated into a comprehensive system.

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South Florida Cleft Palate Clinic

Variety Children's Hospital and Research Foundation  
Cleft Palate Research Study

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DO NOT FILL IN

(1-4)	(5-6)	(7)	(8-9)	(10-11)
Case #	21	Yr.	Mo.	Day
	Form			

## SURGERY INITIAL EXAMINATION PRE-OPERATIVE

(To be used for evaluation before the initiation of ANY operative procedures)

PATIENT'S NAME \_\_\_\_\_ BIRTHDATE \_\_\_\_\_

DATE \_\_\_\_\_

### NOSE

CARD 1

1. Status:

1 Normal	2 R. Cleft Unilat.	3 L. Cleft Unilat.	4 Cleft Bilat.	5 Cleft Median	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(13)

2. Alar base:

1 Normal	2 Flaring	3 Contracted	
2a. Width:			
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2b. Antero-posterior position:

1 Normal	2 Anteriorly Displaced	3 Posteriorly Displaced	
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2c. Infero-superior position:

1 Normal	2 Inferiorly Displaced	3 Superiorly Displaced	
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Alar cartilage dislocation at tip (unilat. slump of tip):

1 None	2 Slight	3 Moderate	4 Severe	
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Alar arch web (skin fold across upper arch):

1 Absent	2 Present	
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>

6. Nasal floor width (from side of columella to inside of alar base):

1 Normal	2 Constricted	3 Wide	
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Columella length:

1 Adequate	2 Moderately Short	3 Very Short	4 Absent	
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Columella position:

1 Straight	2 Slightly Deviated	3 Markedly Deviated	4 Absent	
7a.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1 Normal	2 Retraction	3 Protrusion	
7b.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Septum (anterior portion):

1 Straight	2 Slightly Deviated To Right	3 Slightly Deviated To Left	4 Markedly Deviated To Right	5 Markedly Deviated To Left	6 Absent	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(30)

9. Anterior vestibular airway (nasal aperture):

1 Normal	2 Large	3 Constricted	
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### UPPER LIP

1. Status:

1 Normal	2 R. Cleft Unilat.	3 L. Cleft Unilat.	4 Cleft Bilat.	5 Cleft Median	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Description of Cleft (Vertical Extent):

1 0	2 < 1/3	3 < 2/3	4 < 3/3	5 Complete	
right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
median	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Width from Columella base to right \_\_\_\_\_ mm (37)

Alar base: \_\_\_\_\_ mm (38)

Width at widest point between right \_\_\_\_\_ mm (39)

Lip Elements: \_\_\_\_\_ mm (40)

3. Prolabium: (bilateral clefts only):

1 Large	2 Medium	3 Small	4 None	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Assessment of Tissue of Lateral Lip Elements:

1 Adeq.	2 Mod. Deficient	3 Severely Deficient	
Right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(REVISED 7/66)







DO NOT FILL IN

(1-4)	(5-6)	(7)	(8-9)	(10-11)
Case #	23	Yr.	Mo.	Day
	Form			

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PATIENT'S NAME \_\_\_\_\_ AGE \_\_\_\_\_

DATE OF EVALUATION \_\_\_\_\_

**SURGICAL EVALUATION**

(To be used for initial examination of post-operative cases, and continuing evaluations following initial visit in all cases.)

If the entire area (e.g. Nose) is normal it is indicated by checking outlined box, all other boxes for that area may be left blank. If outlined box is not checked then one box in each horizontal line must be checked.

**NOSE**

**1a.**

1	2
Normal	Abnormal
<input type="checkbox"/>	<input type="checkbox"/>

(13) Card 1

**1b. Status:**

1	2
Post-Op.	Un-Oper.
<input type="checkbox"/>	<input type="checkbox"/>

(14)

**2. Alar base:**

1	2	3
Normal	Flaring	Contracted
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>

(15)  
(16)

**2b. Antero-posterior position:**

1	2	3
Normal	Anteriorly Displaced	Posteriorly Displaced
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>

(17)  
(18)

**2c. Infero-superior position:**

1	2	3
Normal	Inferiorly Displaced	Superiorly Displaced
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>

(19)  
(20)

**3. Alar cartilage dislocation at tip (unilat. slump of tip):**

1	2	3	4
None	Slight	Moderate	Severe
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(21)  
(22)

**4. Alar arch web (skin fold across upper arch):**

1	2
Absent	Present
Pt's. right	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>

(23)  
(24)

**5. Alar arch buckling:**

1	2
Absent	Present
Pt's. right	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>

(25)  
(26)

**6. Nasal floor width (from side of columella to inside of alar base):**

1	2	3
Normal	Constricted	Wide
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>

(27)  
(28)

**7. Nasal floor fistula (pass probe):**

1	2
Absent	Present
Pt's. right	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>

(29)  
(30)

**8. Columella length:**

1	2	3	4
Adequate	Moderately Short	Very Short	Absent
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(31)  
(32)

**9. Columella position:**

**9a.**

1	2	3	4
Straight	Slightly Deviated	Markedly Deviated	Absent
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(33)

**9b.**

1	2	3
Normal	Retraction	Protrusion
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(34)

**10. Septum (anterior portion):**

1	2	3	4	5	6
Straight	Slightly Deviated To Right	Slightly Deviated To Left	Markedly Deviated To Right	Markedly Deviated To Left	Absent
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(35)

**11. Anterior vestibular airway (nasal aperture):**

1	2	3
Normal	Large	Constricted
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>

(36)  
(37)

**UPPER LIP**

**1a.**

1	2
Normal	Abnormal
<input type="checkbox"/>	<input type="checkbox"/>

(38)

**1b. Status:**

1	2
Post-Op.	Un-Oper.
<input type="checkbox"/>	<input type="checkbox"/>

(39)

**2. Horizontal dimension:**

1	2	3
Adequate	Slightly Tight	Severely Tight
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(40)

(REVISED 7/66)

**3. Vertical dimension:**

	1	2	3	
	Adequate	Short	Long	
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(41)
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(42)

**4. Notching:**

	1	2	3	
	None	Vermilion	Skin & Verm.	
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(43)
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(44)
midline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(45)

**5. Cupid's bow:**

	1	2	3	
	Present	Present	Absent	
	Symmetrical	Asymmetrical		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(46)

**6. Philtrum dimple:**

	1	2	
	Present	Absent	
	<input type="checkbox"/>	<input type="checkbox"/>	(47)

**7. Condition of scar:**

	1	2	
	Acceptable	Unacceptable	
	<input type="checkbox"/>	<input type="checkbox"/>	(48)

**8. Muscle function:**

	1	2	3	
	Good	Fair	Poor	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(49)

**9. Post-Op. position of prolabium:**

	1	2	3	
	In	In Lip &	In Lip	
	Columella	Columella		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(50)

**10. Free border balance of vermillion:**

	1	2	3	
	Normal	Thin	Thick	
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(51)
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(52)
midline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(53)

**11. Vermilion eversion (Lower border of upper lip):**

	1	2	
	Satisfactory	Unsatisfactory	
	<input type="checkbox"/>	<input type="checkbox"/>	(54)

**LOWER LIP**

**1. Status:**

	1	2	3	
	Normal	Abnormal (Congenital)	Abnormal (Operated)	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(55)

**2. Position:**

	1	2	3	
	Normal	Protruded	Retracted	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(56)

**3. Scarring:**

	1	2	3	
	Absent	Present	Present	
		Acceptable	Unacceptable	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(57)

**ALVEOLUS**

**1a.**

	1	2	
	Normal	Abnormal	
	<input type="checkbox"/>	<input type="checkbox"/>	(58)

**1b. Status:**

	1	2	
	Post-Op.	Un-Oper.	
	<input type="checkbox"/>	<input type="checkbox"/>	(59)

**2. Premaxilla:**

	1	2	3	
	Present	Congen. Absent	Excised	
2a. Status:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(60)

**2b. Mobility:**

	1	2	
	Stable	Unstable	
	<input type="checkbox"/>	<input type="checkbox"/>	(61)

**2c. Position:**

	1	2	3	4	
	None	Slight	Moderate	Marked	
(1.) Protrusion:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(62)
(2.) Retraction:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(63)

**(3.) Rotation:**

	1	2	3	4	
	to Pt's. right				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(64)
	to Pt's. left				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(65)



**(4.) Infero-superior position:**

	1	2	3	
	Normal	Inferiorly Displaced	Superiorly Displaced	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(66)

**3. Lateral segments: (check rt. & lft.)**

	1	2	
	Normal	Collapsed	
a. Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	(67)
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	(68)

**b. Bowed:**

	1	2		
	No	Yes	Right	Left
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>		
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>		

(69) (70)

**4. Cleft or Fistula (Pass a Probe):**

	1	2	3	4	5	6	
	None	Notching	Cleft <5mm	Cleft >5mm	Fistula <5mm	Fistula >5mm	
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(71)
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(72)
Median	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Card 2 (13)

**5. Bone graft:**

	1	2	3	4	
	None	Right	Left	Median	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(14)

**HARD PALATE**

**1a.**

	1	2	
	Normal	Abnormal (Congenital or operated)	
	<input type="checkbox"/>	<input type="checkbox"/>	(15)

**1b. Status:**

	1	2	3	4	
	Post-Op. complete closure	Post-Op. partial closure	Post-Op. No closure	Un-Oper.	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(16)

**2. Ant.-post. extent of present cleft:**

	1	2	3	4	5	6	
	None	Submucous bony cleft	<2/3	<2/3	<3/3	Complete	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(17)

**3. Width of cleft at junction of hard and soft palate: (If cleft is closed enter "0"):** \_\_\_\_\_mm (18)

**4. Fistulae (If none present, enter "0" on line indicated):**

**4a. No. of fistulae:** \_\_\_\_\_ (19)

**4b. Width of fistulae at widest point:**

1. \_\_\_\_\_mm (20-21)

2. \_\_\_\_\_mm (22-23)

**4c. Ant.-Post. extent of fistulae:**

1. \_\_\_\_\_mm (24-25)

2. \_\_\_\_\_mm (26-27)

FORM 23, CONT'D.

**SOFT PALATE**

**1a.**

1 Normal <input type="checkbox"/>	2 Abnormal <input type="checkbox"/>
---	---

 (28)

**1b. Status:**

	1 Post-Op. complete closure	2 Post-Op. partial closure	3 Post-Op. No closure	4 Un-Oper.	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(29)
<b>1c. Submucous</b> (lack of muscle across midline)	1 No <input type="checkbox"/>	2 Yes <input type="checkbox"/>			(30)
<b>1d. Congenitally Short</b>	<input type="checkbox"/>	<input type="checkbox"/>			(31)
<b>1e. Paralyzed (neurologic basis):</b>					
	1 No	2 Partially	3 Completely		
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		(32)
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		(33)
<b>1f. Immobilized (post surgic<sup>c</sup> result):</b>					
	1 No	2 Partially	3 Completely		
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		(34)
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		(35)

**2. Extent of present cleft:**

	1 None	2 Bifid Uvula	3 <1/3	4 <2/3	5 <3/3	6 Complete	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(36)

**3. Width of present cleft:**

	1 None	2 Small	3 Medium	4 Large	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(37)

**4. Length:**

	1 Adequate	2 Slightly Short	3 Moderately Short	4 Markedly Short	
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(38)
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(39)

**5. Assessment of levator activity (say "Ah" and "Pah"):**

	1 Good	2 Fair	3 Poor	4 None	5 Cannot Evaluate	
Pt's. right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(40)
Pt's. left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(41)

**6. Fistula:**

	1 None	2 Present small <5mm	3 Present large >5mm	
Anterior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(42)
Middle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(43)
Posterior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(44)

**7. Scarring:**

	1 None	2 Minimum	3 Moderate	4 Severe	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(45)

**OROPHARYNX**

**1. Velopharyngeal closure (speech and mirror test):**

	1 Good	2 Fair	3 Poor	4 None	5 Cannot Evaluate	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(46)

**2. Pharyngeal flap:**

	1 None	2 Wide Attachment	3 Narrow Attachment	
Based superiorly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(47)
Based inferiorly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(48)



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 Cleft Palate Research Study  
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DO NOT FILL IN				
(1-4)	(5-6)	(7)	(8-9)	(10-11)
Case#	24 Form	Yr.	Mo.	Day

REPORT OF SURGICAL PROCEDURES

PATIENT'S NAME \_\_\_\_\_

DATE OF SURGICAL PROCEDURE \_\_\_\_\_

PLEASE CHECK PROCEDURES USED:

LIP

1. Procedures Used:

		1	2	3	
		Primary One Stage	Primary Two Stage	Secondary	
a. Adhesion (Johanson) :		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(13)
b. Quadrilateral Flap (LeMesurier-Hagedorn) :		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(14)
c. Z-Plasty (Tennison-Randall) :		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(15)
d. Straight Line Closure (Rose-Thompson) :		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(16)
e. Triangle Flap (Mirault-Blair-Brown) :		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(17)
f. Rotation Advancement (Millard) :		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(18)
g. Lateral Full Thickness Flaps Below Prolabium (Federspiel) :		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(19)
h. Lateral Muscle Elements Joined Behind Prolabium (Shultz) :		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(20)
i. Partial Columella Lengthening (Skoog) :		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(21)
j. Forked Flap (Millard) :		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(22)
		1	2		
		Primary	Secondary		
k. Full Thickness Lower Lip Flap (Abbe) :	1.	<input type="checkbox"/>	<input type="checkbox"/>		(23)
		Unilateral	Midline		
	2.	<input type="checkbox"/>	<input type="checkbox"/>		(24)
		Small	Large		
	3.	<input type="checkbox"/>	<input type="checkbox"/>		(25)
		1	2		
		Primary	Secondary		
l. Full Thickness Lower Lip Free Graft :	1.	<input type="checkbox"/>	<input type="checkbox"/>		(26)
		Unilateral	Midline		
	2.	<input type="checkbox"/>	<input type="checkbox"/>		(27)
		Small	Large		
	3.	<input type="checkbox"/>	<input type="checkbox"/>		(28)

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

MAXILLARY STRUCTURES

1. Procedures Used:

		1	2	
		Primary	Secondary	
a. Soft Tissue closure of Alveolus without bone graft :		<input type="checkbox"/>	<input type="checkbox"/>	(29)
		1	2	
		Primary	Secondary	
b. Alveolar Bone Graft :	1.	<input type="checkbox"/>	<input type="checkbox"/>	(30)
		Unilateral	Bilateral	
	2.	<input type="checkbox"/>	<input type="checkbox"/>	(31)
		One Stage	Two Stage	
	3.	<input type="checkbox"/>	<input type="checkbox"/>	(32)

<b>c. Premaxilla:</b>		<b>1</b>	<b>2</b>	
	<b>Total</b>	<b>1</b>	<b>Partial</b>	
1. Resection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(33)
	<b>Yes</b>	<b>2</b>	<b>No</b>	
2. Pin Fixation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(34)
<b>d. Vomer:</b>		<b>1</b>	<b>2</b>	
	<b>Yes</b>	<b>No</b>		
Wedge Excision:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(35)
<b>e. Hard Palate Closure (check procedure used):</b>				
1. Vomerian Flap (Veau)	<input type="checkbox"/>			(36)
2. Muco-periosteal flap (Von Langenbeck)	<input type="checkbox"/>			(37)
3. Muco-periosteal flap (Wardill):	<input type="checkbox"/>			(38)
4. Nasal-mucosal flap	<input type="checkbox"/>			(39)
5. Lip mucosal flap (Burian)	<input type="checkbox"/>			(40)

Notes: \_\_\_\_\_  
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**SOFT PALATE**

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<b>1. Procedures Used:</b>		<b>1</b>	<b>2</b>	
		<b>Initial</b>	<b>Secondary</b>	
a. Lateral relaxing incisions (Von Langenbeck):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(41)
b. V-Y Advancement (Wardill):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(42)
c. Pushback (Dorrance):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(43)
d. Hard Palate Nasal Mucosal Advancement (Cronin):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(44)
e. Island Flap to Nasal Lining for Lengthening (Millard):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(45)
f. Free Skin Graft (Dorrance):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(46)
g. Z-Plasty to Nasal Layer (Kilner):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(47)
		<b>1</b>	<b>2</b>	
		<b>Yes</b>	<b>No</b>	
<b>11. Adjuncts to Surgery:</b>				
a. Division of Neurovascular Bundles:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(48)
b. Dissection of Neurovascular Bundles:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(49)
c. Division of Hard from Soft Palate:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(50)
d. Fracture of the Hamulus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(51)
e. Osteotomy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(52)
		<b>1</b>	<b>2</b>	
		<b>Yes</b>	<b>No</b>	
<b>111. Areas Left Raw:</b>				
1. Nasal hard palate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(53)
2. Oral Hard Palate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(54)
3. Nasal Lining defect following pushback	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(55)

Notes: \_\_\_\_\_  
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**NOSE**

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<b>1. Procedures Used:</b>			
a. Submucous resection	<input type="checkbox"/>		(56)
b. Cartilage Strut to Columella and Tip	<input type="checkbox"/>		(57)
c. Forked Flap (Millard)	<input type="checkbox"/>		(58)
d. Midline prolabium flap (Gonsoul)	<input type="checkbox"/>		(59)
e. Alar columella advancement (Cronin)	<input type="checkbox"/>		(60)
f. Alar cartilage graft (Musgrave)	<input type="checkbox"/>		(61)
g. Alar cartilage lift (Horton)	<input type="checkbox"/>		(62)
h. Alar web excision (Kilner)	<input type="checkbox"/>		(63)
i. Alar web Z-Plasty (Straith)	<input type="checkbox"/>		(64)
j. Osteotomy	<input type="checkbox"/>		(65)

**NOSE cont'd.**

- |    |                            |                          |      |
|----|----------------------------|--------------------------|------|
|    |                            | 1                        |      |
|    |                            | Yes                      |      |
| k. | Bone graft under alar base | <input type="checkbox"/> | (66) |
| l. | Alar wedge excision:       |                          |      |
|    | 1. Right                   | <input type="checkbox"/> | (67) |
|    | 2. Left                    | <input type="checkbox"/> | (68) |
| m. | Nasal floor revision       | <input type="checkbox"/> | (69) |

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
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**PHARYNX**

- |    |   |                          |              |
|----|---|--------------------------|--------------|
| 1. | <b>Pharyngoplasty:</b>                              |                          |              |
| a. | Transposed muscle flaps (Hynes)                     | <input type="checkbox"/> | (70)         |
| b. | Posterior pharyngeal flap (sup. base) (Roselli)     | <input type="checkbox"/> | (71)         |
| c. | Post-pharyngeal flap (inf. base) (Rosenthal)        | <input type="checkbox"/> | (72)         |
| d. | Transverse incision closed longitudinally (Wardill) | <input type="checkbox"/> | CARD 11 (13) |
| e. | Foreign body implant                                | <input type="checkbox"/> | (14)         |

Notes: \_\_\_\_\_  
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 \_\_\_\_\_