PUBLIC USE DATASET ANNOTATED ECRF

Critical Pertussis in U.S. Children

Severe Morbidity, Sequelae, and Mortality:
A Prospective Cohort Study

CPCCRN Protocol Number 001

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Centers for Disease Control and Prevention (CDC) Meningitis & Vaccine Preventable Diseases Branch

Protocol Version: 4.01

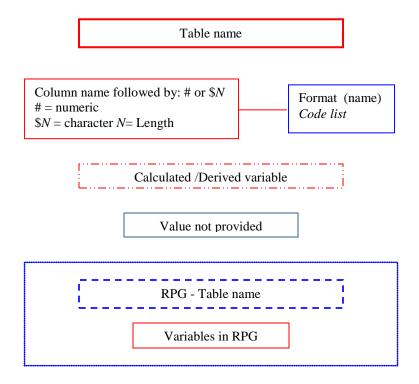
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Annotations key

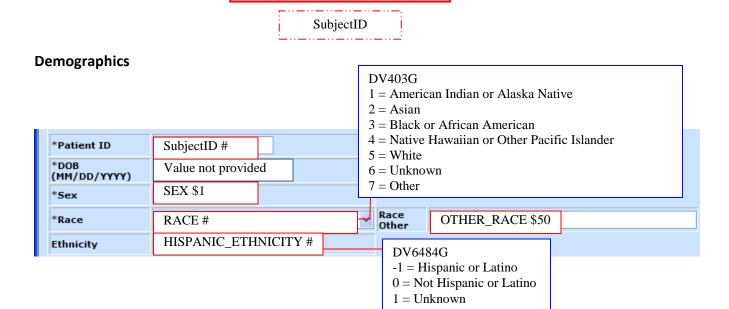


Notes

SubjectID is a randomly generated ID that is unique for each subject enrolled in the study. SubjectID is present in all datasets to facilitate merging. Some forms have multiple records for a subject. The unique identifier(s) for each form are provided just below the dataset name.

All out-of-range and other questionable data have been included in the public use datasets.

Sensitive and/or identifying information entered in free text fields have been removed from the public use datasets.



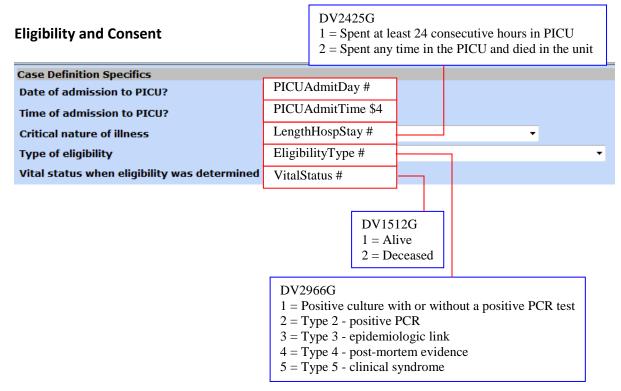
Demographics (1 of 1)

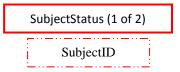
Derived variables included in the Demographics dataset:

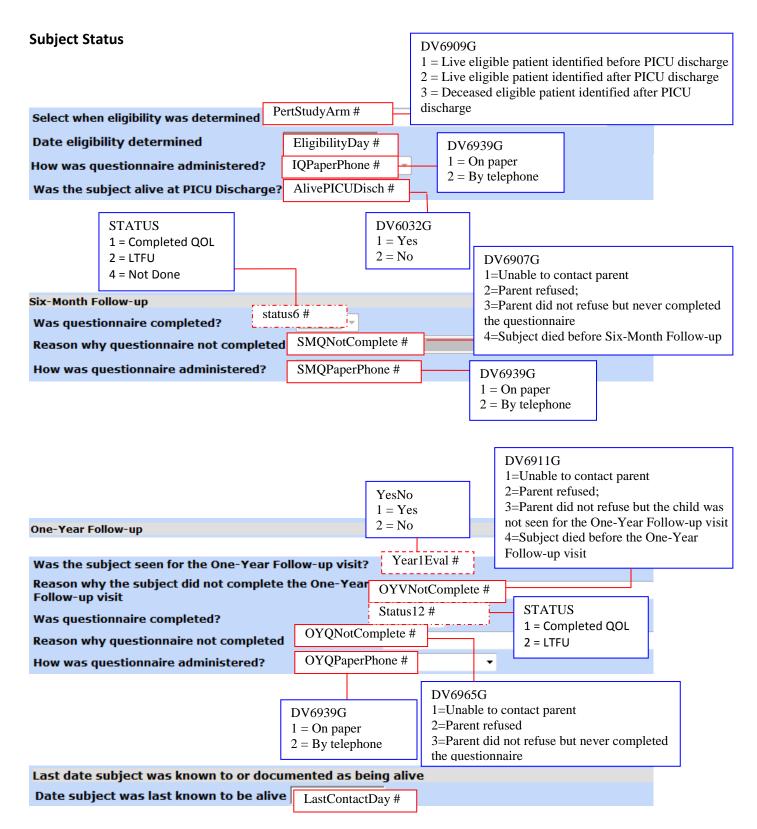
Variable	Format	Type	Label	Algorithm / Notes
	ageindays	ш	Patient age at PICU	
agemaays		#	admission (days)	
			Patient age at PICU	
ageinmonths	#	admission (months)		
ageinyears	.,	Patient age at PICU	Decorded to 2 decimal places	
	#	admission (years)	Rounded to 2 decimal places.	

Eligibility (1 of 1)

SubjectID



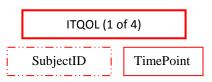


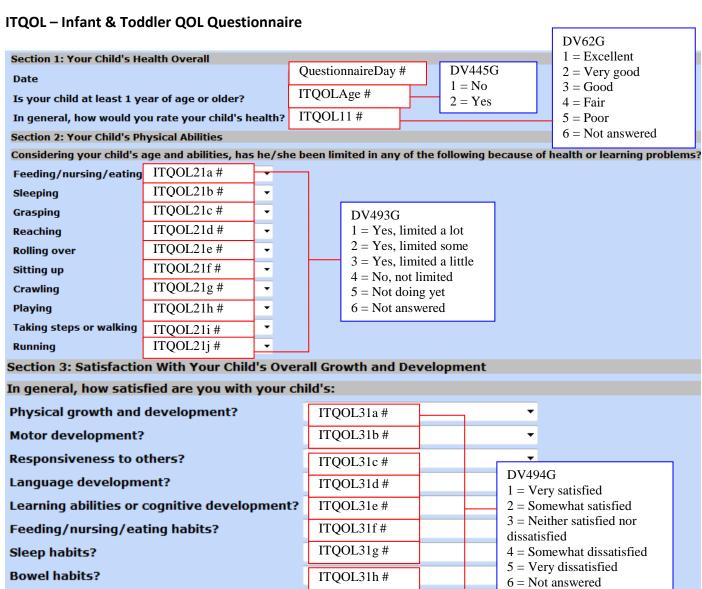


SubjectStatus (2 of 2)

Derived variables included in the SubjectStatus dataset:

Variable	Format	Ty pe	Label	Algorithm / Notes
elig6	YESNO 1 = Yes 0 = No	#	Eligible for 6 month follow-up	Subject is eligible for six month follow up if s/he did not die or withdraw from the study prior to 6 months.
status6	STATUS 1 = Completed QOL 2 = LTFU 4 = Not Done	#	Month 6 follow-up status	LTFU = Lost to follow up. A subject may only be considered LTFU at six months if s/he is ineligible for one year follow up.
elig12	YESNO 1 = Yes 0 = No	#	Eligible for 12 month follow-up	Subject is eligible for twelve month follow up if s/he < 1 year old at the time of PICU admission and did not die or withdraw from the study prior to 12 months.
status12	STATUS 1 = Completed QOL 2 = LTFU	#	Month 12 follow-up status	LTFU = Lost to follow up.
year1eval	YESNO 1 = Yes 0 = No	#	On-site evaluation completed (12 month)	
year1Mullen	YESNO 1 = Yes 0 = No	#	Mullen completed (12 month)	



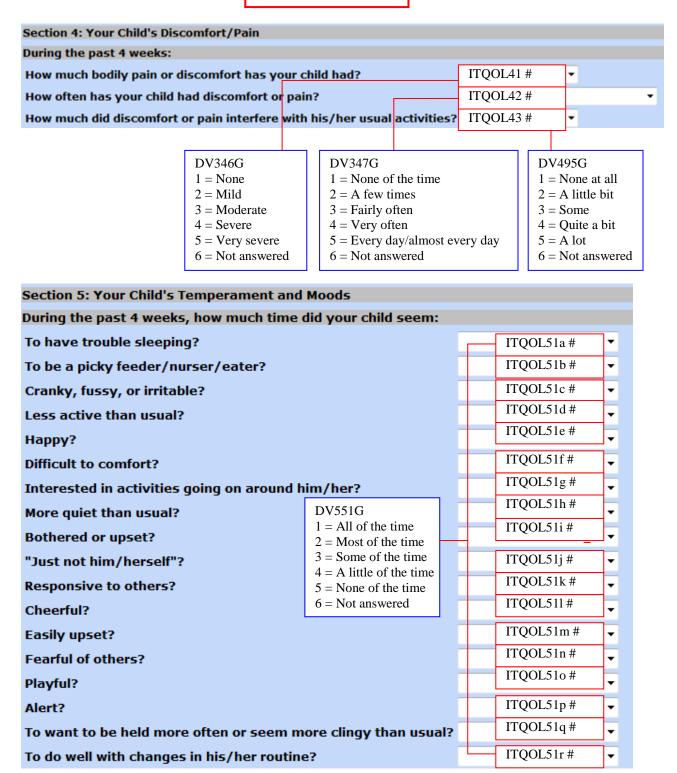


ITQOL31i # ITQOL31j #

General temperament?

Overal growth and development?

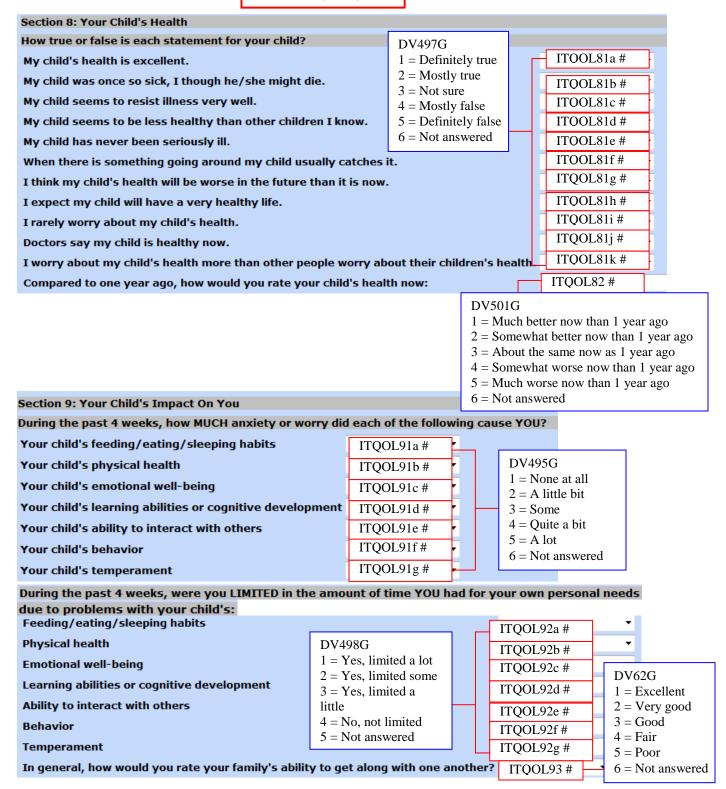
ITQOL (2 of 4)



ITQOL (3 of 4)

Section 6: Your Child's Behavior Overall How much do your agree/disagree with each statement for your child? ITQOL61a# My child's behavior is excellent. ITQOL61b# My child's behavior is sometimes difficult to manage. ITQOL61c# My child seems to misbehave quite often. ITQOL61d# My child seems to misbehave more often than other children I know. My child's behavior is rarely very bad. ITQOL61e# • I think my child's behavior will be worse in the future. • ITQOL61f# I rarely worry about my child's behavior. • ITQOL61g# Doctors or other child professionals have suggested that my child's behavior is a problem. ITQOL61h# • ITQOL61i# I think my child's behavior will not be a problem for him/her in the future. • People have complimented me on my child's behavior. ITQOL61j# I worry about my child's behavior more than other parents worry about their child's behavior. ITOOL61k# Others have complained about my child's behavior. ITQOL611# ITQOL62# Compared to children of the same age, how would you rate your child's behavior overall? DV6028G DV62G 1 = Strongly agree 1 = Excellent2 = Agree2 =Very good 3 = Not sure3 = Good4 = Disagree4 = Fair5 = Strongly disagree 5 = Poor6 = Not answered6 = Not answeredSection 7: Getting Along With Others During the past 4 weeks, how often did your child: Seem to cooperate with others? ITQOL71a# Seem unable to sit still for more than a few minutes? ITQOL71b# • Go to sleep or to bed with few problems? ITQOL71c# Hit, kick, or bite others? ITQOL71d# ITQOL71e# Appear sorry after having misbehaved? DV496G Have behavior that was difficult to manage? ITQOL71f# 1 =Very often ITQOL71g# Seem able to adjust to new situations or strangers? • 2 = Fairly often3 = SometimesITQOL71h# • Act shy or timid? 4 = Almost neverITQOL71i# Get along with other children? • 5 = Never6 = Not answeredITQOL71j# Throw tantrums? Respond positively to affection? ITQOL71k# ITQOL711# • Act withdrawn? ITQOL71m# Seem distracted more than other children his/her age? Act his/her age? • ITQOL71n# Listen or follow directions? ITQOL710#

ITQOL (4 of 4)

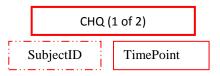


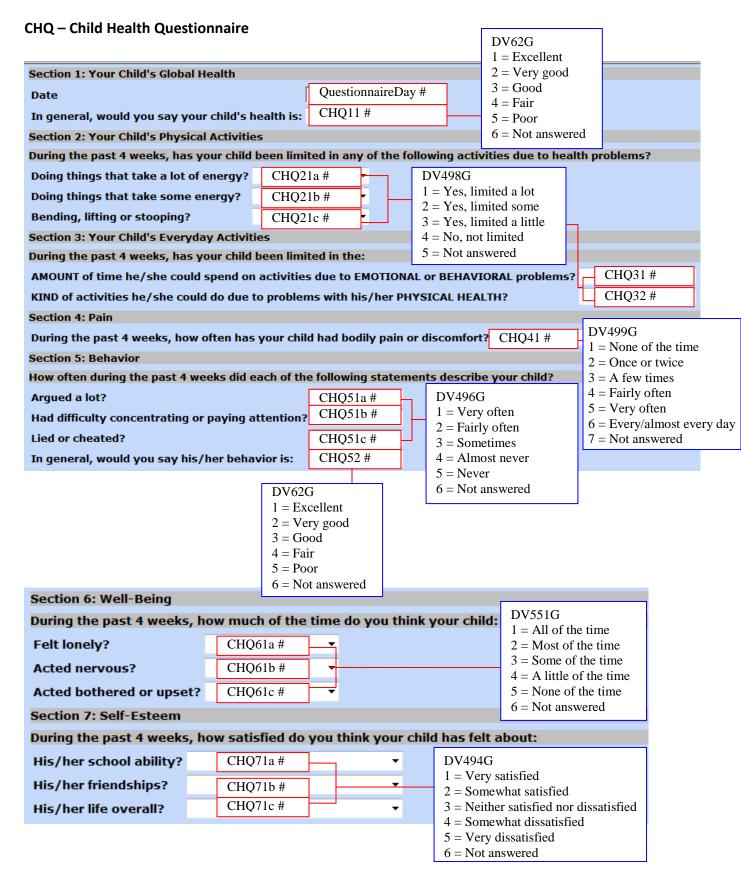
Derived variables included in the ITQOL dataset:

Variable	Format	Type	Label	Algorithm / Notes
timepoint	TimePt 1 = Baseline 2 = Six months 3 = One year	#	Time point of questionnaire	
OHraw		#	Overall Health (raw)	See note 1.
ОН		#	Overall Health (0-100)	See note 2.
PA2raw		#	Physical Abilities (raw)	See note 1.
PA2		#	Physical Abilities (0-100)	See note 2.
GDraw		#	Growth and Development (raw)	See note 1.
GD		#	Growth and Development (0-100)	See note 2.
BPraw		#	Bodily Pain/Discomfort (raw)	See note 1.
ВР		#	Bodily Pain/Discomfort (0-100)	See note 2.
TMraw		#	Temperament and Moods (raw)	See note 1.
TM		#	Temperament and Moods (0-100)	See note 2.
GBraw		#	General Behavior (raw)	See note 1.
GB		#	General Behavior (0-100)	See note 2.
GB2raw		#	Global Behavior Item (raw)	See note 1.
GB2		#	Global Behavior Item (0-100)	See note 2.
BEraw		#	Behavior - Getting Along with Others (raw)	See note 1.
BE		#	Behavior - Getting Along with Others (0-100)	See note 2.
GHraw		#	General Health Perceptions (raw)	See note 1.
GH		#	General Health Perceptions (0-100)	See note 2.
СН		#	Change in Health (categorical)	This item should remain as a categorical variable and does not need to be transformed.
PEraw		#	Parental Impact - Emotional (raw)	See note 1.
PE		#	Parental Impact - Emotional (0-100)	See note 2.
PTraw		#	Parental Impact - Time (raw)	See note 1.
PT		#	Parental Impact - Time (0-100)	See note 2.
FCraw		#	Family Cohesion (raw)	See note 1.
FC		#	Family Cohesion (0-100)	See note 2.

Note 1: Based on published instructions for calculating raw scores for the ITQOL-97. The manual used for scoring was: Infant and Toddler Quality of Life Questionnaire-97 (ITQOL-97) Confidential Scoring Instructions (2007). Boston, MA: HealthActCHQ, Inc. These instructions are confidential and cannot be shared directly with this study documentation.

Note 2: Based on published instructions for calculating transformed scores for the ITQOL-97 (see reference above). The transformed scores for all scales range from 0 to 100, with higher scores indicating better health.





DV500G 1 = Definitely true Section 8: Your Child's Health 2 = Mostly trueHow true or false is each of these statements for your child? 3 = Don't know4 = Mostly falseMy child seems to be less healthy than other children I know. CHQ81a# 5 = Definitely falseMy child has never been seriously ill. CHQ81b# 6 = Not answeredCHQ81c# I worry more about my child s health than other people worry about their children s health CHQ82# Compared to one year ago, how would you rate your child's health now: DV501G 1 =Much better now than 1 year ago 2 = Somewhat better now than 1 year ago 3 = About the same now as 1 year ago 4 = Somewhat worse now than 1 year ago 5 =Much worse now than 1 year ago Section 9: You and Your Family 6 = Not answeredDuring the past 4 weeks, how MUCH emotional worry or concern did each of the following cause YOU? DV495G Your child's physical health CHQ91a# 1 =None at all Your child's emotional well-being or behavior CHO91b# 2 = A little bit 3 = Some4 = Quite a bit5 = A lot6 = Not answeredDuring the past 4 weeks, were you LIMITED in the amount of time YOU had for your own needs because of: CHO92a# DV498G Your child's physical health 1 =Yes, limited a lot CHQ92b# Your child's emotional well-being or behavior 2 =Yes, limited some 3 = Yes, limited a little 4 = No, not limited 5 = Not answeredDuring the past 4 weeks, how often has your child's health or behavior: Limited the types of activities you could do as a family? CHQ93a# CHQ93b# Interrupted various everyday family activities? In general, how would you rate your family's ability to get along with one another? CHQ94# DV496G DV62G 1 =Very often 1 = Excellent2 = Fairly often2 =Very good 3 = Sometimes3 = Good4 = Almost never4 = Fair5 = Never5 = Poor

6 = Not answered

6 = Not answered

CHQ (2 of 2)

Derived variables included in the CHQ dataset:

Variable	Format	Type	Label	Algorithm / Notes
timepoint	TimePt 1 = Baseline 2 = Six months	#	Time point of questionnaire	
GGHraw		#	Global Health (raw)	See note 1.
GGH		#	Global Health (0-100)	See note 2.
PFraw		#	Physical Functioning (raw)	See note 1.
PF		#	Physical Functioning (0-100)	See note 2.
REBraw		#	Role/Social Limitations - Emotional/Behavioral (raw)	See note 1.
REB		#	Role/Social Limitations - Emotional/Behavioral (0-100)	See note 2.
RPraw		#	Role/Social Limitations - Physical (raw)	See note 1.
RP		#	Role/Social Limitations - Physical (0-100)	See note 2.
BPraw		#	Bodily Pain/Discomfort (raw)	See note 1.
ВР		#	Bodily Pain/Discomfort (0- 100)	See note 2.
BEraw		#	Behavior (raw)	See note 1.
BE		#	Behavior (0-100)	See note 2.
GBEraw		#	Global Behavior Item (raw)	See note 1.
GBE		#	Global Behavior Item (0-100)	See note 2.
MHraw		#	Mental Health (raw)	See note 1.
МН		#	Mental Health (0-100)	See note 2.
SEraw		#	Self Esteem (raw)	See note 1.
SE		#	Self Esteem (0-100)	See note 2.
GHraw		#	General Health Perceptions (raw)	See note 1.
GH		#	General Health Perceptions (0-100)	See note 2.
СН		#	Change in Health (categorical)	This item should remain as a categorical variable and does not need to be transformed.
PEraw		#	Parental Impact - Emotional (raw)	See note 1.
PE		#	Parental Impact - Emotional (0-100)	See note 2.
PTraw		#	Parental Impact - Time (raw)	See note 1.
PT		#	Parental Impact - Time (0-100)	See note 2.
FAraw		#	Family Activities (raw)	See note 1.
FA		#	Family Activities (0-100)	See note 2.

FCraw	#	Family Cohesion (raw)	See note 1.
FC	#	Family Cohesion (0-100)	See note 2.

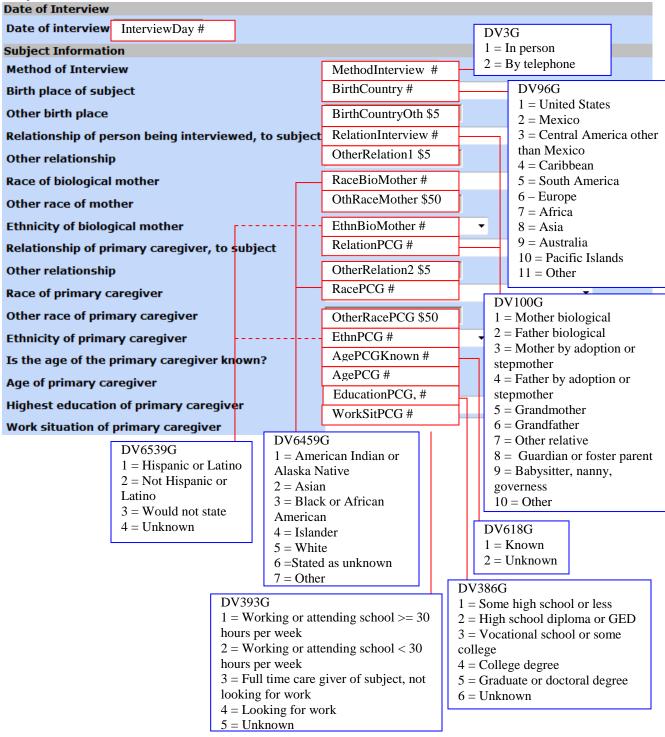
Note 1: Based on published instructions for calculating raw scores for the CHQ-PF28. The manual used for scoring was: Child Health Questionnaire (CHQ) Scoring and Interpretation Manual (2008). Boston, MA: HealthActCHQ, Inc. These instructions are confidential and cannot be shared directly with this study documentation.

Note 2: Based on published instructions for calculating transformed scores for the CHQ-PF28 (see reference above). The transformed scores for all scales range from 0 to 100, with higher scores indicating better health.

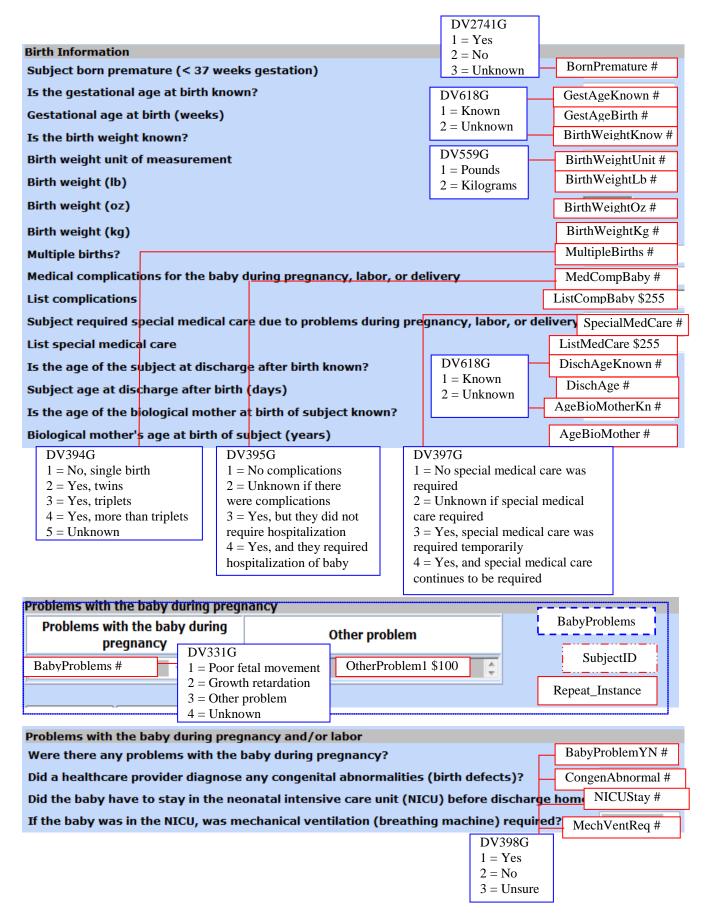
SubjectInfo (1 of 2)

SubjectID

Subject and Birth Information



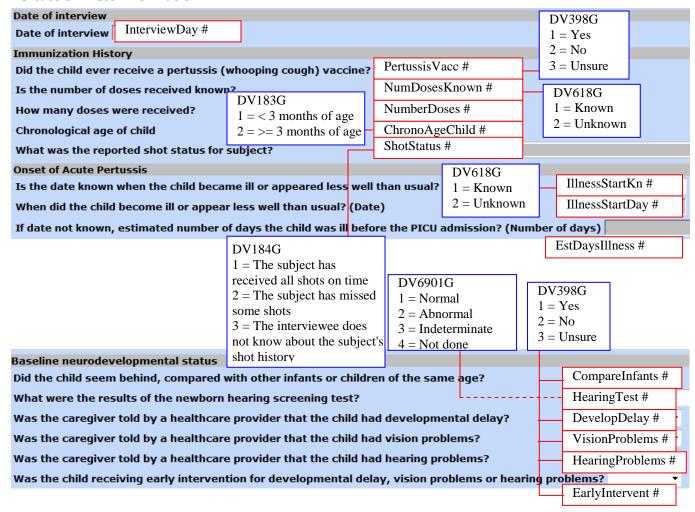
SubjectInfo (2 of 2)



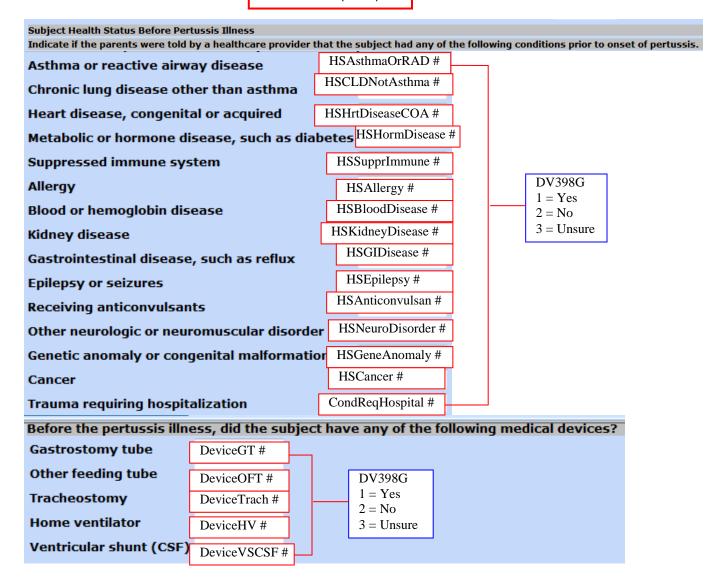
Pertillness (1 of 3)

SubjectID

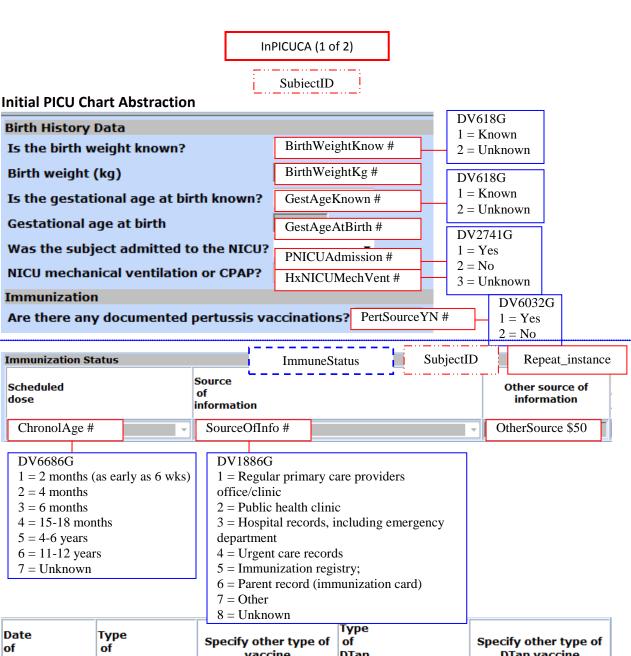
Pertussis Illness Information



PertIllness (2 of 3)



DV2741G 1 = YesHistory of Pertussis Illness 2 = NoDid the child have a cough during the acute pertussis illness? CoughDurIllness # 3 = UnknownCoughStartKn # Is the date when the cough started known? DV618G CoughStartDay 1 = KnownWhat date did the cough start? 2 = UnknownDaysPriorAdmit# If date unknown, how many days prior to PICU admission? DV14G CoughStop# When did the cough stop? 1 = Still coughing attime of PICU admission CoughStopDay # Specific date cough stopped 2 =Cough stopped on Was cough associated with any of the following symptoms before coming to the specific date Couldn't stop coughing or hard to catch breath UnableStopCough # 3 =Cough stopped, but timing uncertain High pitched noise (whoop) between spells WhoopSpells # 4 =Unsure if cough has stopped Vomiting after the coughing VomitCough # Fainting or passing out during or after coughing spell FaintingCough # Did the child have any of the following other symptoms during the acute pertussis illness, prior to admission to the PICU? DV398G 1 = YesStopped breathing for 20 sec or longer, unassociated with cough StopBreathing # 2 = NoTongueFaceBlue # Tongue or face turned blue, unassociated with cough 3 = UnsureNasalCongest # Runny nose or nasal congestion FeverMore101F# Fever above 101 degrees F Difficulty with feeding DifficultFeed # SeizureOrConvul# Seizures or convulsions



Birth History Data

Birth weight (kg)

Immunization

Immunization Status

ChronolAge #

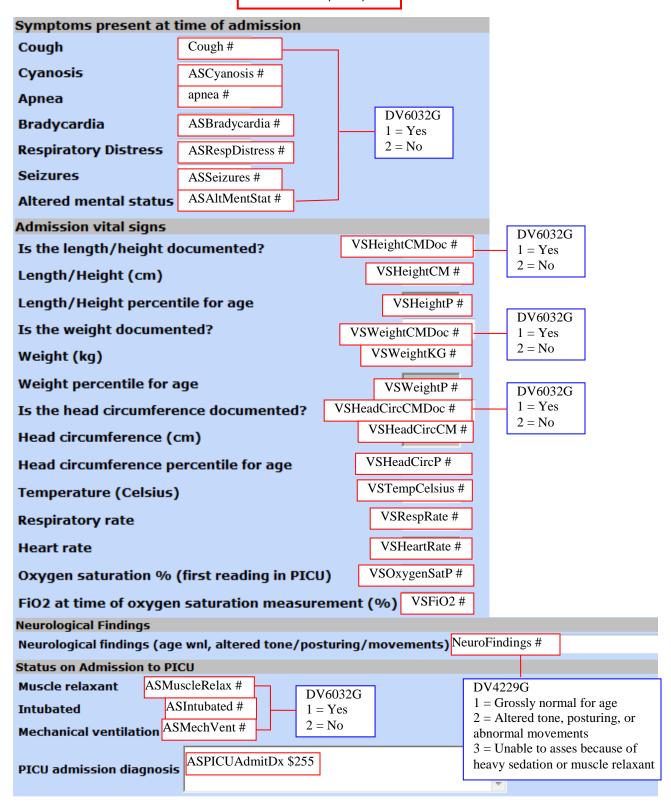
Scheduled

dose

Is the birth weight known?

Gestational age at birth

InPICUCA (2 of 2)



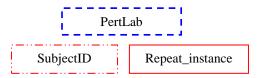
Notes

Out of range percentiles in the Fenton Growth Chart are typically source reported as "< 3" or ">97". Due to the entry restriction of integer fields (i.e. VSHeadCircP, VSWeightP and VSHeightP), study sites were instructed to enter "2" for percentiles reported as "<3" and "98" for percentiles reported as ">97".

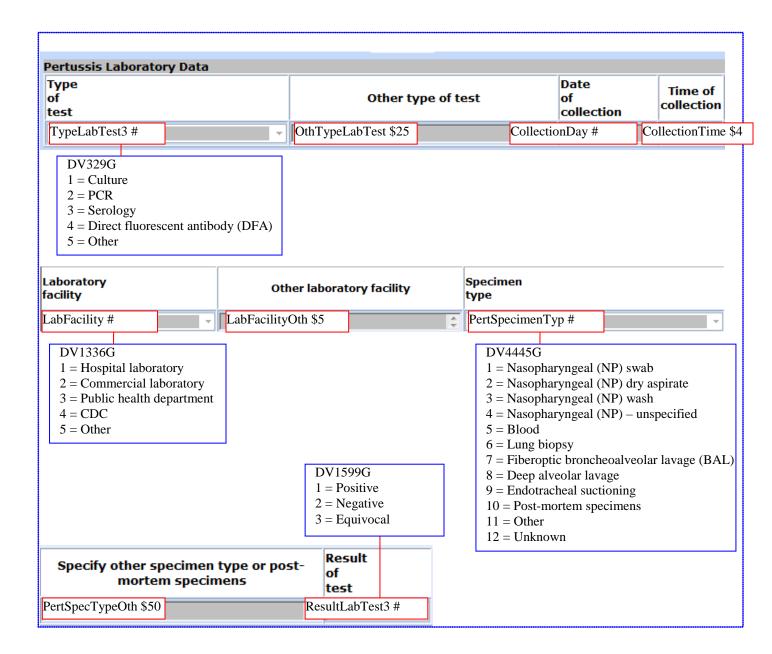
Likewise, Standard Growth Chart percentiles reported as "< 5" are recorded as "4" and percentiles reported as ">95" are recorded as "96".

Derived variables included in the InPICUCA dataset:

Variable	Format	Type	Label	Algorithm / Notes
PRISMIIICalcS		#	PRISM III Score	Based on the first 12 hours of PICU admission.

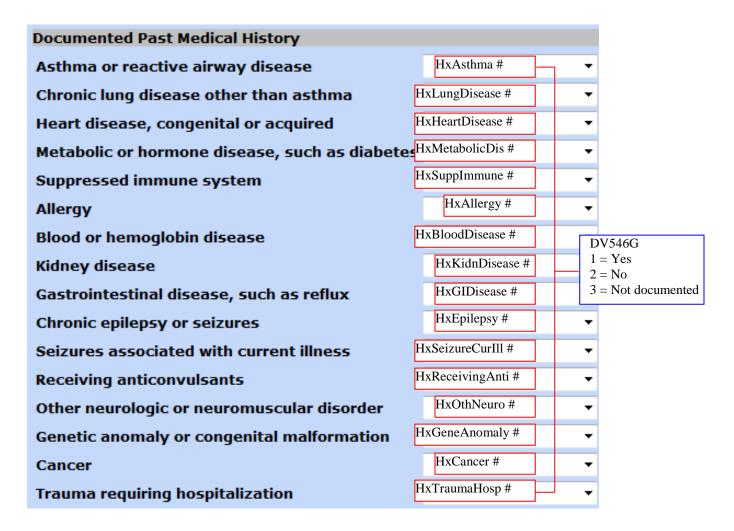


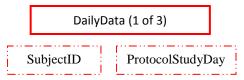
Pertussis Laboratory Data



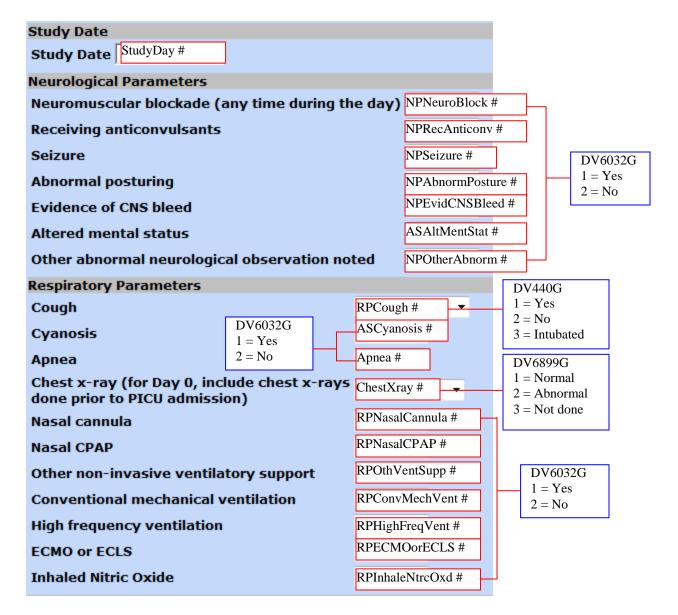
PastMedHx (1 of 1)
SubjectID

Documented Past Medical History

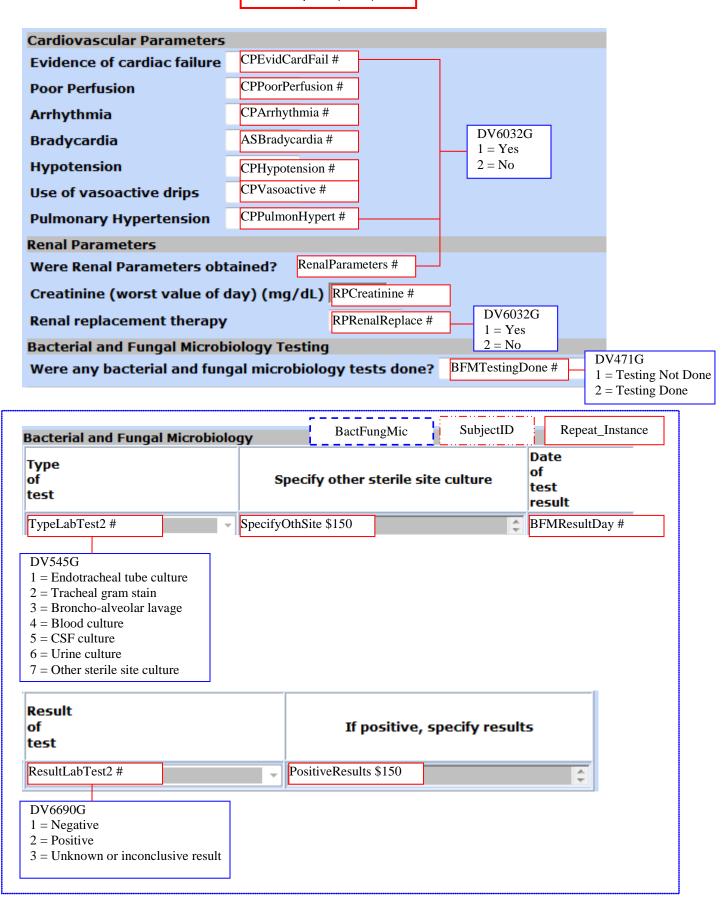


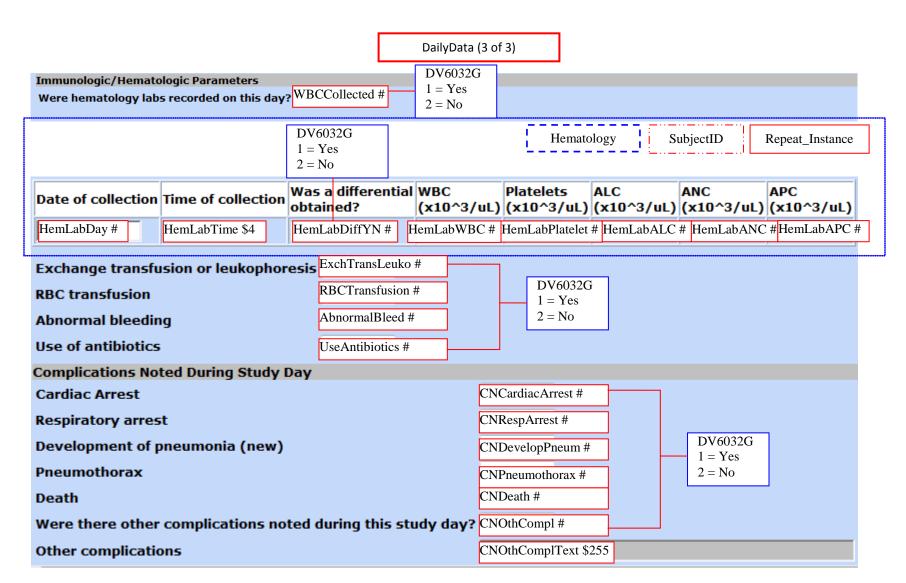


Daily PICU Data Collection (Days 0 -28)



DailyData (2 of 3)





Derived variables included in the DailyData dataset:

Variable	Format	Type	Label	Algorithm / Notes
ProtocolStudyDay	ProtocolDay	#	Protocol-Defined Study Day	See pg. 43 of protocol for definition.
	0 = Day 0			
	1 = Day 1 etc.			

PICUDC (1 of 1) SubjectID

PICU Discharge Information

Discharge Information	
Date of PICU discharge	PICUDCDay #
Time of PICU discharge (HHMM):	PICUDCTime \$4
Is the head circumference document	DV6032G 1 = Yes
Head circumference (cm)	VSHeadCircCM # 2 = No
Head circumference percentile for ag	VSHeadCircP #
Is the weight documented?	VSWeightCMDoc # DV6032G 1 = Yes
Weight (kg)	VSWeightKG # 2 = No
Weight percentile for age	VSWeightP# DV6032G
Is the length/height documented?	VSHeightCMDoc # 1 = Yes
Length/Height (cm)	VSHeightCM #
Length/Height percentile for age	VSHeightP # DV6032G
Receiving anticonvulsants	NPRecAnticonv # 1 = Yes 2 = No
Seizure assessment	SeizureAssess #
Feeding assessment	FeedingAssess #
Arousal assessment	ArousalAssess #
Communication assessment	CommunicAssess #
Motor strength assessment	MotorAssess #
Motor tone assessment	MotorToneAssess #
DV4228G 1 = No seizures occurred during the PICU admission 2 = Seizures documented during PICU admission DV539G 1 = Oral feeding only 2 = Oral plus tube feeding (NG, NJ, or gastrostomy) 3 = NG or NJ tube feeding only 4 = Gastrostomy feeding only 5 = No enteral feeding	DV6902G 1 = Normal tone for age 2 = Increased or decreased tone for age 3 = Moderately floppy or spastic, including poor head control for age 4 = No response to stimulation, severe diffuse spasticity, posturing DV548G 1 = Normal activity for age 2 = Asymmetric limb activity or withdrawal to stimulation 3 = Withdraws from pain 4 = No response to stimulation
DV542G 1 = Awake, alert, or looks to clapping 2 = Arouses but does not localize sound 3 = Responds to pain with agitation or withdrawal 4 = Non-responsive	DV547G 1 = Age-appropriate vocalization, facial expressiveness, gestures 2 = Slightly decreased vocalization or non-verbal interaction 3 = Moderately decreased vocalization or non-verbal expressiveness of the property o

Notes

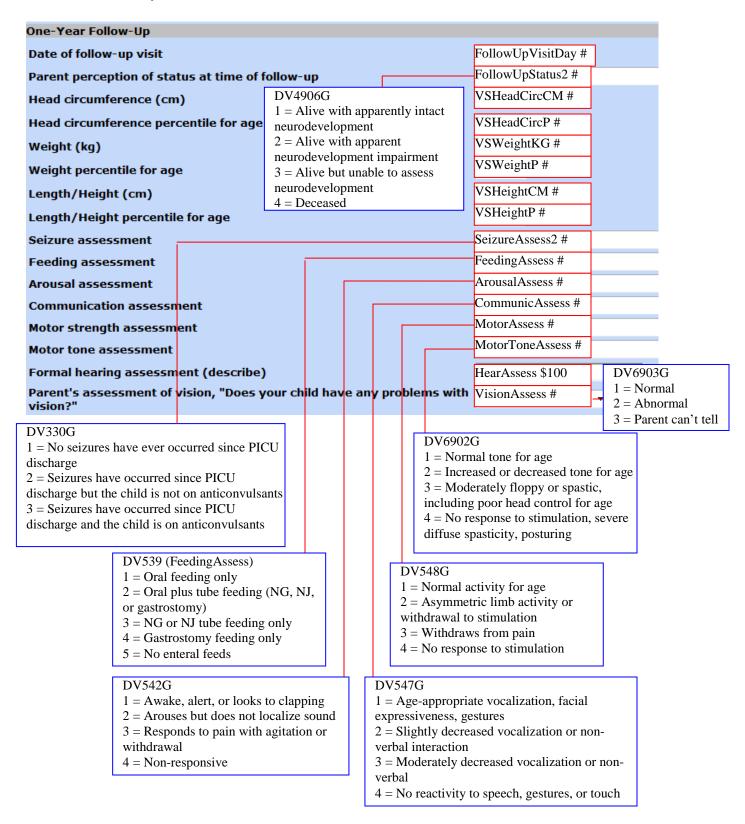
Out of range percentiles in the Fenton Growth Chart are typically source reported as "< 3" or ">97". Due to the entry restriction of integer fields (i.e. VSHeadCircP, VSWeightP and VSHeightP), study sites were instructed to enter "2" for percentiles reported as "<3" and "98" for percentiles reported as ">97".

Likewise, Standard Growth Chart percentiles reported as "< 5" are recorded as "4" and percentiles reported as ">95" are recorded as "96".

OneYear (1 of 1)

SubjectID

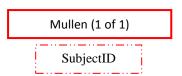
One-Year Follow-up



Notes

Out of range percentiles in the Fenton Growth Chart are typically source reported as "< 3" or ">97". Due to the entry restriction of integer fields (i.e. VSHeadCircP, VSWeightP and VSHeightP), study sites were instructed to enter "2" for percentiles reported as "<3" and "98" for percentiles reported as ">97".

Likewise, Standard Growth Chart percentiles reported as "< 5" are recorded as "4" and percentiles reported as ">95" are recorded as "96".



Mullen Assessment

Language of Mullen Administration What language was the Mullen administered? Other, specify:	DV7193G 1 = English 2 = Spanish 3 = Other	MullenLanguage # LanguageOther \$50
If the Mullen was administered in a language other than English, how	4 4	V 5 11.1 "
Derived variables included in the Mullen dataset:	= Bilingual examine = English examiner with an interpreter B = Other	er .

Variable	Format	Type	Label	Algorithm / Notes
MullenDay		#	Mullen assessment day	
			(relative to PICU admission)	
ageMullenyears		#	Age (years) at Mullen	Rounded to 2 decimal places.
			assessment	
ageMullenmonths		#	Age (months) at Mullen	
			assessment	
ageMullendays		#	Age (days) at Mullen	
,			assessment	
GM_RAW		#	Gross Motor Raw Score	See note 1.
VR_RAW		#	Visual Reception Raw Score	See note 1.
_			<u> </u>	
FM_RAW		#	Fine Motor Raw Score	See note 1.
DI DAIM			Receptive Language Raw	6
RL_RAW		#	Score	See note 1.
			Expressive Language Raw	
EL_RAW		#	Score	See note 1.
GM_TSCR		#	Gross Motor T-Score	See note 2.
VR_TSCR		#	Visual Reception T-Score	See note 2.
FM_TSCR		#	Fine Motor T-Score	See note 2.
RL_TSCR		#	Receptive Language T-Score	See note 2.
EL_TSCR		#	Expressive Language T-Score	See note 2.
2014 6622				
COM_SSCR		#	Early Learning Composite	See note 3.
			Standard Score	
COM_PERC		#	Early Learning Composite	See note 3.
			Percentile Rank	

Note 1: Raw scores for the Mullen were calculated at clinical sites following administration (see Mullen, EM (1995). Mullen Scales of Early Learning: AGS Edition Item Administration Book & Manual. Minneapolis, MN: Pearson).

Note 2: Scale T-scores were calculated in Mullen software based on raw scores and child's age. T-scores are standardized to have a mean of 50 and standard deviation of 10 in a normative population (see manual).

Note 3: The Early Learning Composite Standard Score and Percentile Rank were calculated in Mullen software. This score is derived from the four cognitive scales (fine motor, visual reception, receptive language, and expressive language) and is standardized to have a mean of 100 and a standard deviation of 15 in a normative population (see manual).

MullenADJ (1 of 1)
SubjectID

Mullen Assessment (Adjusted)

Language of Mullen Administration What language was the Mullen administered? Other, specify:		DV7193G 1 = English 2 = Spanish 3 = Other		MullenLanguage # LanguageOther \$50	
If the Mullen was administered in a language other than English	, how	ı was it administer	ed?	NonEnglish #	
Other, specify:	DV7194G			NonEnglishOther \$10	
		Bilingual examiner English examiner			
		n an interpreter			

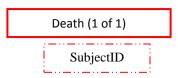
Derived variables included in the MullenADJ dataset: 3 = Other

Variable	Format	Туре	Label	Algorithm / Notes
MullenDay		#	Mullen assessment day	
			(relative to PICU admission)	
ageMullenyears		#	Age (years) at Mullen	Rounded to 2 decimal places.
			assessment	
ageMullenmonths		#	Age (months) at Mullen assessment	
ageMullendays		#	Age (days) at Mullen	
ageiviulielluays		#	assessment	
Premature	YESNO	#	Born premature	Based on parent report or chart
	1 = Yes			abstraction.
	0 = No			
GestAgeBirthWks		#	Gestational age at birth in	Based on parent report, or, if
			weeks	unavailable, chart abstraction.
GM_RAW		#	Gross Motor Raw Score	See note 1.
VR_RAW		#	Visual Reception Raw Score	See note 1.
FM_RAW		#	Fine Motor Raw Score	See note 1.
RL_RAW		#	Receptive Language Raw Score	See note 1.
EL_RAW		#	Expressive Language Raw	See note 1.
			Score	
GM_TSCR		#	Gross Motor T-Score	See note 2.
VR_TSCR		#	Visual Reception T-Score	See note 2.
FM_TSCR		#	Fine Motor T-Score	See note 2.
RL_TSCR		#	Receptive Language T-Score	See note 2.
EL_TSCR		#	Expressive Language T-Score	See note 2.
COM_SSCR		#	Early Learning Composite	See note 3.
			Standard Score	
COM_PERC		#	Early Learning Composite Percentile Rank	See note 3.

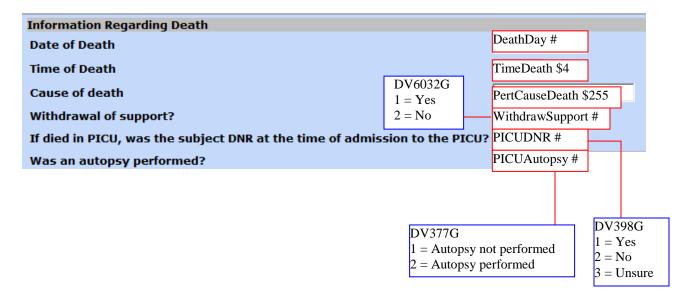
Note 1: : Raw scores for the Mullen were calculated at clinical sites following administration (see Mullen, EM (1995). Mullen Scales of Early Learning: AGS Edition Item Administration Book & Manual. Minneapolis, MN: Pearson).

Note 2: Scale T-scores were calculated in Mullen software based on raw scores and child's age. T-scores are standardized to have a mean of 50 and standard deviation of 10 in a normative population (see manual).

Note 3: The Early Learning Composite Standard Score and Percentile Rank were calculated in Mullen software. This score is derived from the four cognitive scales (fine motor, visual reception, receptive language, and expressive language) and is standardized to have a mean of 100 and a standard deviation of 15 in a normative population (see manual).



Death Information



Derived variables included in the Death dataset:

Variable	Format	Type	Label	Algorithm / Notes
DeathHosp	YESNO	#	Death in initial hospitalization	Based on data collected via queries
	1 = Yes			outside of primary database.
	0 = No			