

Data Collection (REDCap)

Study Days and Data Collection

Study days are defined as follows and data must be collected according to study days:

- + Study Day 1 = ACU admit date/time (not randomization) until 23:59 the same day.
- + Study Day 2 = the subsequent day starting at 00:00 to 23:59 that day.

Example: A patient is admitted to the ACU on July 8th, 2020 at 4:00 PM (16:00). The study days would be:

- + Study Day 1 = 2020-07-08 from 16:00 to 2020-07-08 at 23:59
- + Study Day 2 = 2020-07-09 from 00:00 to 2020-07-09 at 23:59
- + Data MUST be collected according to calendar day as described above
- + Do NOT collect data according to your flow sheet unless it runs from 00:00-23:59





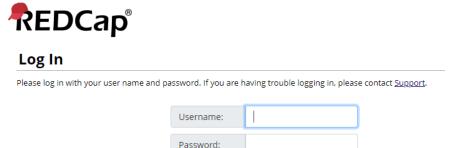
REDCap[™]

Access REDCap™ at the following web address:

https://ceru.hpcvl.queensu.ca/EDC2/redcap/

REDCap is the electronic data capture system for the study.

Login with your Username and Password.



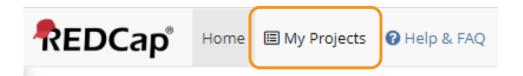
Log In

Forgot your password?





My Projects



- + Select My Projects
- + Then select VICToRY

Welcome to REDCap!

REDCap is a secure web platform for building and mana surveys. REDCap's streamlined process for rapidly creat offers a vast array of tools that can be tailored to virtual



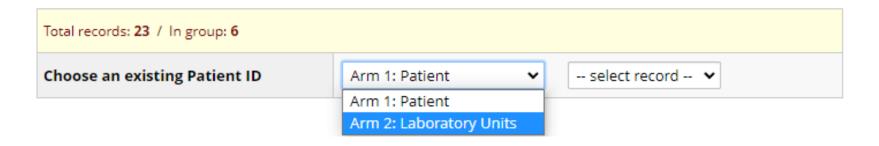




Laboratory Units

After randomization of the first patient, you will need to enter the lab units for your site.

- + Select 'Arm 2: Laboratory Units'
- + Select your site number







Laboratory Units

- + If the lab units used at your site are not listed please notify the PL.
- + If you lab changes the lab units used in their reports during the study please notify the PL.

Patient ID	1001	
T-bilirubin	⊕ ○ mg/dL	reset
Serum Creatinine	⊕ O mg/dL⇒ O μmol/L	reset
Glucose	⊕ O mg/dL ⊝ O mmol/L	reset
Which is collected at your site?	⊕ O Urea ⊝ O BUN	reset
Urea	⊕ O mg/dL ⊝ O mmol/L	reset
Lactate Dehydrogenase (LDH)	⊕ O U/L	reset
Hemoglobin	○ g/dL ⊕ ○ mmol/L ⊝ g/L	reset
Haptoglobin	⊕ Omg/dL ⊝ Og/L	reset
Serum HCO ₃	→ O mEq/L → O mmol/L	reset
Albumin	→ ○ g/dL→ ○ g/L	reset





Patients Automatically Populated

Patients will automatically be added to REDCap AFTER they have been randomized in the CRS.

- + Click on View / Edit Records
- + Arm 1: Patient is the default
- Select a patient from the dropdown list to open the data entry grid







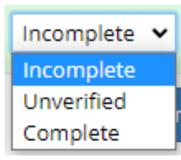
Event Grid

Data Collection Instrument	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Adhock	Outcomes	6 Month Follow- Up
Baseline											
Trauma											
SOFA											
Microbiology											
Ventilation/RRT											
Vasopressors And Inotropes											
Vitamin C Dosing											
Laboratory											
Fluid Balance											
Study Blood Work											
Burn Related Procedures											
Protocol Violation											
Events Of Interest											
Hospital Overview											
Deferred Consent		ick	on	2 (tok	to	on	Δn	the		
COVID-19	CI	CK	OH	a		LO	OP	CII	LIIC		
Survival Assessment					1:						
SF-36	CO	rre	spo	ond	nık	g TO	orm	٦.			0
ADL											
IADL											
Serious Adverse Event Report											
Site Investigator Confirmation											

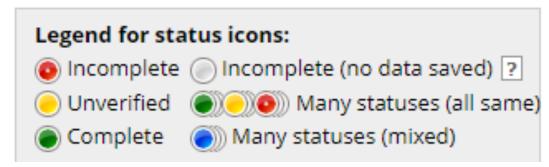




Form Status



- + When saving a form use the Form Status to control the colour of the dots.
- + The status does not influence queries.
- + Can be used as a visual reference of the status of the data entry for that form.

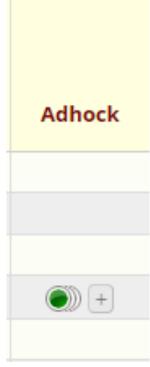






Repeating Forms

- + The following forms are repeating forms and are located on the Adhock Event.
 - + Microbiology
 - + Burn Related Procedures
 - + Serious Adverse Events
- + This function allows you to add as many instances of the form as you may need.

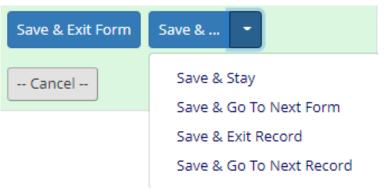




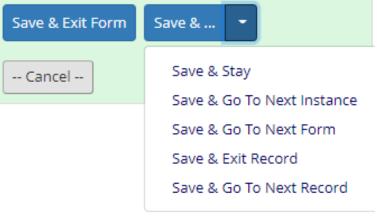


Saving Forms

- + Before leaving any form you must **Save** the data you have entered, or it will be lost.
- + Options when saving a regular form.



+ Options when saving a repeating form.







Worksheets and REDCap[™]

eCRF worksheets are provided to assist you in collecting required data. They are optional and can be edited to better suit your requirements.

The **Medical Chart** is the source document.

Exception: 6 Month Follow-up Questionnaires worksheets are the source documents – need to keep

Instructions for the eCRF worksheets must be reviewed.

Data Entry is done in REDCAP™ and forms may look different than the worksheets provided.





Data Collection Forms

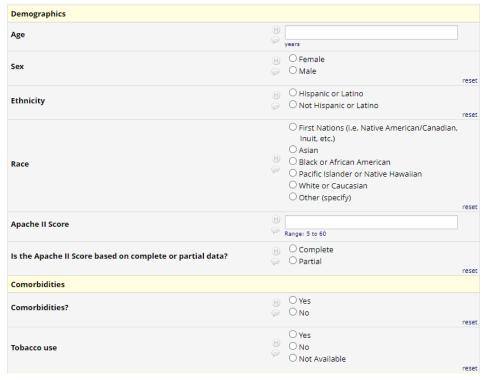
+ For a complete overview of the data collection required please refer to the SPM and eCRF worksheets.





Baseline

- + Complete the Baseline data.
 - + Patient demographics
 - + Apache II Score
 - + Comorbidities
 - + Admission dates/times
 - + Co-enrollment
 - + Burn Injury information
 - + Clinical Frailty Scale







Clinical Frailty Scale

Assessed by research staff based on interaction with family, treating teams, and review of the medical chart.
 Consider the time frame of the 2 weeks preceding the current acute episode.



VERY FIT: People who are robust, active, energetic and motivated. These people commonly
exercise regularly. They are among the fittest for their age.



 WELL: People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally.



MANAGING WELL: People whose medical problems are well controlled, but are not regularly
active beyond routine walking.



VULNERABLE: While not dependent on others for daily help, often symptoms limit activities.
 A common complaint is being "slowed up" and/or being tired during the day.



5. MILDLY FRAIL: These people often have more evident slowing, and need help in high order IADLS (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.



MODERATELY FRAIL: People who need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing.



 SEVERELY FRAIL: Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).



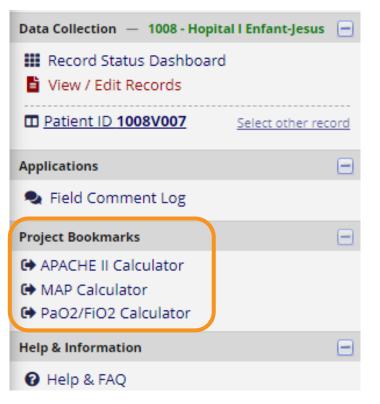
VERY SEVERELY FRAIL: Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.





Project Bookmarks

+ Resources such as the APACHE
II Calculator can be found
under **Project Bookmarks** in
the left-hand menu.







Trauma

- + Indicate if the patient had a Traumatic Brain Injury.
- + If yes, select the mechanism of injury and enter the Glasgow Coma Score.

Traumatic Brain Injury		
Does the patient have a Traumatic Brain Injury?	⊕ Yes ○ No	reset
Mechanism of Traumatic Brain Injury (TBI) (check ALL that apply):	☐ Acceleration/Deceleration ☐ Direct impact: blow to the head ☐ Direct impact: head against object ☐ Ground level fall ☐ Fall from height > 1 meter ☐ Crush ☐ Blast ☐ Other (specify)	
Glasgow Come Scale (GCS)		
Eye Opening	○ 1 - None ⊕ ○ 2 - To Pain ○ ○ 3 - To Speech ○ 4 - Spontaneous	reset
Verbal Response	O 1 - None O 2 - Incomprehensible Words O 3 - Inappropriate Words O 4 - Confused O 5 - Oriented	reset
Best Motor Response	○ 1 - None ○ 2 - Extension ○ 3 - Abnormal flexion ○ 4 - Withdraws from pain ○ 5 - Localizes to pain ○ 6 - Obeys commands	reset





Trauma

- + Indicate if the patient sustained trauma other than the burn injury.
- + If yes, select the site of injury and required treatments.

Other Trauma	
Did the patient sustain trauma other than the burn injury?	⊕ Yes ○ No
Site of other injuries (check ALL that apply):	Spine (associated neurological deficit) Spine (not associated neurological deficit) Extremities (bones, vessels, nerves, important soft tissue) Chest Abdomen Pelvis (pelvic bones, rectum, vagina, bladder, urethra) Face and skull
Was interventional radiology or an endovascular procedure used to treat or prevent bleeding (e.g. spleen, liver, endovascular repair of aorta)?	→ O Yes→ O Noreset
Were any of the following Trauma Operative Interventions/Treatments performed?	☐ Thoracotomy ☐ Craniotomy/craniectomy ☐ Laparotomy ☐ External or internal fixation of pelvic, femoral, tibial, or spinal fracture ☐ None of the above





SOFA

- + The SOFA score will be collected daily.
- + Elements of the SOFA score not collected elsewhere will be collected here.

Lowest PaO2/FiO2 (PF ratio)	○ ≥ 400 mmHg or N/A ○ 300 - 399 mmHg ○ 200 - 299 mmHg ○ 100 - 199 mmHg with respiratory support ○ < 100 mmHg with respiratory support
Lowest Platelets	○ ≥ 150 x10 ⁹ /L (10 ³ /μL) or N/A ○ 100 - 149 x10 ⁹ /L (10 ³ /μL) ○ 50 - 99 x10 ⁹ /L (10 ³ /μL) ○ 20 - 49 x10 ⁹ /L (10 ³ /μL) ○ < 20 x10 ⁹ /L (10 ³ /μL) reset
Mean Arterial Pressure (MAP)	 H ○ < 70 mmHg D ≥ 70 mmHg reset





Microbiology

- + The Microbiology form is located on the Adhock event.
- + Record Gram negative bacteremia that occurred >72 hours after ACU admission until hospital discharge, death, or 3 months after ACU admission, whichever comes first.
- + ONLY report cultures that meet ALL of the following criteria:
 - 1. Venous or arterial blood culture
 - 2. Positive for Gram negative bacteria
 - 3. >72 hours from Admission
 - 4. New infection (do not record subsequent positive cultures of an organism that has already been reported)





Ventilation

- + Indicate if the patient ever received invasive mechanical ventilation.
- + Up to 5 ventilation events can be recorded.

Ventilation Event 1	
Start Date	Today Y-M-D
Start Time	HH:MM 24hr
Start Time not available	⊞ □ Not available
Stop Date & Time:	 ⊖ Same as death date & time ⊖ Still vented 3 months post ACU admission
Stop Date	⊕ YYYY-MM-DD Today Y-M-D
Stop Time	HH:MM 24hr
Was mechanical ventilation re-instituted ≥ 48 hours from the last mechanical ventilation stop date/time? Note: Do not record episodes of temporary ventilation (defined as < 48 hrs) unless it's the first episode.	⊕ ○ Yes ⊝ ○ No





Renal Replacement Therapy

+ Indicate if the patient received renal replacement therapy (dialysis) during their hospital stay. Answer whether RRT was started due to acute renal failure. If yes, enter the start and stop dates.

⊕ Yes ⊖ No reset
⊕ Yes ○ No reset
Today Y-M-D
Same as death date & time At 3 months, still on renal replacement therapy (dialysis) in hospital Continued past hospital discharge Actual stop date





Vasopressors and Inotropes

- Daily indicate if a continuous infusion of vasopressors and/or inotropes were given.
- + Record the rate in μg/kg/min (units/min for vasopressin)

Did the patient receive a continuous infusion of vasopressors or inotropes today?	● Yes → No
Vasopressors	
Vasopressor or Inotrope Type	□ Dopamine >5μg/kg/min □ Dobutamine ☑ Norepinephrine □ Epinephrine □ Phenylephrine >50μg/min □ Vasopressin □ Milrinone □ Levosimendan
Highest hourly rate of norepinephrine	μg/kg/min





Vasopressors and Inotropes

- + On Outcomes record the start and stop date/time for all vasopressors and/or inotropes that were given until hospital discharge, death, or 3 months after ACU admission, whichever comes first.
- + Up to 5 events can be recorded for each vasopressor.
- + Considered a new event if stopped for ≥ 24 hours.

Did the patient receive a continuous infusion of vasopressors or inotropes during this ICU stay?	● Yes ○ No reset
Vasopressors	
Vasopressor or Inotrope Type	Dopamine >5µg/kg/min Dobutamine ✓ Norepinephrine Epinephrine >50µg/min Vasopressin Milrinone Levosimendan
Norepinephrine Event 1	
Start Date of norepinephrine	H Today Y-M-D YYYY-MM-DD
Start Time of norepinephrine	HH:MM 24hr
Stop date of norepinephrine	Same as death date & time Still on vasopressor/inotrope 3 months post ACU admission
Actual Stop Date	H Today Y-M-D YYYY-MM-DD
Actual Stop Time	HH:MM 24hr
Was norepinephrine re-started ≥ 24 hours from the last norepinephrine stop date/time?	○ Yes ○ No





Continuous Infusion vs Bolus

- + We want you to record continuous infusions only, do not record bolus doses.
- + If it runs for more than 1 hr then continuous.
- + If < 1 hr then look at the intention of the order.
 - + If it's an order for x mL and then done it's likely a bolus.
 - + If it's an order to titrate dose to achieve a target MAP and another order is required to stop it, then likely continuous.





Vitamin C Dosing

- + Indicate how many times study intervention was given. Choices are 0-6.
- + If no intervention was given, select 0 and explain why. Reasons can include:
 - + "study intervention not started yet"
 - + "16 doses completed"

How many times was the study intervention given today?	(H) (O V)
Please explain why study intervention was not given today.	H





Vitamin C Dosing

- + For each dose given, indicate if the dose was interrupted. There is space to record up to 3 interruptions.
- + Enter the start and stop times.

How many times was the study intervention given today?	^ℍ	
Dose 1		
Was the dose interrupted?	⊕ Yes ○ No	reset
How many times was the dose interrupted?	[⊕] □ ▼	
Initial Start Time	HH:MM 24hr	
First Stop Time	HH:MM 24hr	
Second Start Time	HH:MM 24hr	
Final Stop Time	HH:MM 24hr	
Was the full volume infused?	⊕ Yes ○ No	reset
Dose 2		reset





Vitamin C Dosing

+ If the full volume wasn't infused enter the total volume provided and the partial volume infused, along with the reason the full volume wasn't given. This is your PV.

Dose 1	
Was the dose interrupted?	→ O Yes→ Noreset
Initial Start Time	HH:MM 24hr Now H:M
Final Stop Time	HH:MM 24hr Now H:M
Was the full volume infused?	→ O Yes→ Noreset
Total volume provided	⊕ mL
Partial volume infused	⊕ mL
Please explain why the full dose of investigational product was not received:	Н
Note: this is the record of the protocol violation, no need to complete the PV form as well.	Expand





Laboratory

Highest Serum Creatinine	₩ μmol/L OR mg/dL
Serum Creatinine N/A	⊕ Not Available
Highest T-bilirubin	⊞
T-bilirubin N/A	⊞ □ Not Available
Highest Urea	⊞ mmol/L OR mg/dL
Urea N/A	^ℍ □ Not Available
Glucose closest to 08:00 am	mmol/L OR mg/dL
Glucose N/A	⊞ □ Not Available
Did the patient have a hypoglycemic event? (< 3.8 mmol/L or < 68.4 mg/dL)	→ ○ Yes → ○ No res
Highest Lactate Dehydrogenase (LDH)	H
Lactate Dehydrogenase N/A	□ Not Available
Lactate Dehydrogenase N/A Lowest Arterial pH	
	⊕ Not Available
Lowest Arterial pH	B Not Available

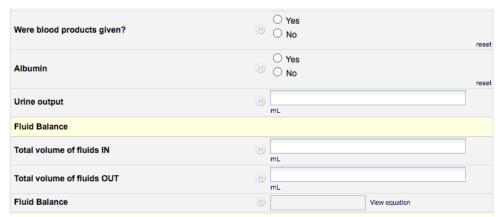
Highest Lactate Dehydrogenase (LDH)	H
Lactate Dehydrogenase N/A	⊕ □ Not Available
Lowest Arterial pH	H P
Arterial pH N/A	⊕ □ Not Available
Lowest Serum HCO ₃	⊕ mmol/L OR mEq/L
Serum HCO₃ N/A	⊕ □ Not Available
Lowest Albumin	⊕ g/L OR g/dL
Albumin N/A	⊕
Clinical suspicion of hemolysis?	
Lowest Hemoglobin	mmol/L OR g/dL OR g/L
Hemoglobin N/A	⊕ □ Not Available
Highest Haptoglobin	⊕ g/L OR mg/L
Haptoglobin N/A	⊕ □ Not Available
Highest Reticulocyte count	H 96
Reticulocyte count N/A	^ℍ □ Not Available





Fluid Balance

- + If blood products (pRBCs and plasma) or albumin are given, please record the volume.
- + Total volume IN will include any blood products and/or albumin received, and Total volume OUT will include urine output.







Study Blood Work

- + If study blood work is done, please record if any non-study vitamin C was given.
- + Total daily dose is the amount given from 00:00-23:59.

Was study blood drawn?	Yes No, required No, not required reset
Time study blood was drawn	HH:MM 24hr
EDTA Tube	⊕ ○ Yes ○ No reset
Serum Tube	⊕ ○ Yes ⊝ ○ No
Non-Study Vitamin C	
Did the patient receive non-study Vitamin C today?	⊕ Yes ○ No reset
Total Daily Dose	⊞ mg/day
Route	⊕ ○ IV ○ PO reset





Burn Related Procedures

+ Record all burn related procedures from Hospital admission until Hospital discharge or death.

Date	H 31 Today Y-M-D
Was the procedure planned or unplanned?	⊕ ○ Planned⊝ ○ Unplannedreset
Where was the procedure done?	⊕ OR O Burn unit/ICU reset
Type of procedure (check all that apply)	□ Excision/Debridement (tangential, fascial, dermabrasion, hydrosurgical, enzymatic) □ Temporary covering (xenograft, allograft, and artificial skin, dermal matrices) □ Autograft □ Autograft - Other (Autologous Regenerative Epidermal Suspension (i.e. RECELL®) and Cultured epithelial autograft (CEA)) □ Excision and primary closure/composite tissue transfer □ Escharotomy □ Fasciotomy □ Amputation □ Other specify





Protocol Violations

- + Protocol violations/deviations for Vitamin C Dosing and Study Blood Work will be recorded on their respective forms.
- + Other protocol violations will be recorded on the Protocol Violation form such as:
 - + Dispensing/dosing error
 - + Accidental unblinding
 - + Open label IV Vitamin C given (> 200 mg/day)
 - + Oral Vitamin C given (> 1500 mg/day)
 - + Missed IP dose(s)
 - + Other (specify)





Events of Interest

+ For a new diagnosis of oxalate kidney stones, severe hemolysis, severe acid-base/ electrolyte imbalances or refractory hypoglycemia record the date of diagnosis, if IP was stopped, and the SI/Sub-I rational for continuing or stopping IP.

Are there any Events of Interest to report?	Yes No	reset
New diagnosis of oxalate kidney stones?	Yes No	reset
Date of new diagnosis of oxalate kidney stones	H Today Y-M-D YYYY-MM-DD	
Was IP stopped?	○ Yes ○ No	reset
		10001
Physicians rational as to why IP continued or stopped:	H	
		Expand
Severe hemolysis?	○ Yes ○ No	reset
Severe acid-base/ electrolyte imbalances?	○ Yes	reset
Refractory hypoglycemia?	○ Yes	reset





Hospital Overview

The following data are recorded on the Hospital Overview form:

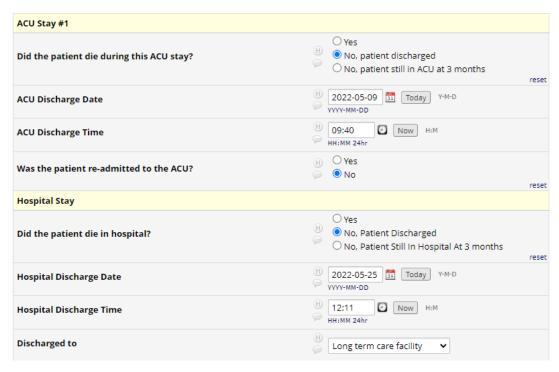
- + ACU discharge information
- + Hospital discharge information, including the location discharged to
- + If deceased death date, time, & cause of death







Hospital Overview



- + Record outcome of ACU Stay #1 (death, discharge, consent withdrawal)
- + If applicable, record additional ACU Stays, Hospital Discharge, or death.





COVID-19

During the patient's hospital stay, record their COVID-19 status.



+ If the patient tests positive, or negative, or is presumed positive record the date.



+ If the patient initially tests negative, but then tests positive, record the positive test.





6 Month Assessments

MARK YOUR CALENDARS:

6 months after ACU admission +/- 2 weeks, survival status and follow-up assessments need to be completed.

We have programmed REDCap to send you two emails:

- + 5.5 months after ACU admission
- + 7 months after ACU admission

Please obtain survival status even if it is outside of the data collection window





Event Grid – After Outcomes

Data Collection Instrument	Day 1	Day 8	Adhock	Outcomes	6 Month Follow- Up
Baseline					
Trauma					
SOFA					
Microbiology					
Ventilation/RRT					
Vasopressors And Inotropes				0	
Vitamin C Dosing					
Laboratory					
Fluid Balance					
Study Blood Work					
Burn Related Procedures					
Protocol Violation					
Events Of Interest					
Hospital Overview				0	
Deferred Consent					
COVID-19				0	
Survival Assessment					
SF-36					
ADL					
IADL					0
Serious Adverse Event Report					
Site Investigator Confirmation					

+ The 6 Month Follow-up forms, including Survival Assessment are the last column on the VICToRY grid.





6 Month Survival

+ 6 Month Mortality is a Secondary Outcome of this Study

Was the survival status obtained?	● Yes ○ No
Date survival status obtained	Today Y-M-D
Source of Information	Patient Alternative contact person(s) (Specify relationship) Family Physician Medical Records Obituaries Internet Other (specify)
Specify the alternative contact's relationship with the patient	Н
Survival Status	O Alive Deceased

If the Alternative contact person is used remember to enter their relationship to the patient. Do not enter proper names as they could identify the patient.





6 Month Survival (continued)

- + It is vital that **EVERY** resource possible is used to obtain the 6 Month Survival Status of each patient.
- + If survival status is not obtained, please complete the form to confirm all attempts were made to obtain the information.

Was the survival status obtained?	○ Yes
	 3 attempts to contact the patient were made (mandatory)
	 3 attempts to contact the alternative contact person(s) were made (mandatory if applicable)
Confirm which of the following were completed	→ Family doctor contacted (mandatory if available)
	 No medical records on the patient available at month 6 (mandatory)
	 Internet searches for the patient name did not reveal survival status (mandatory)
Last date known to be alive	Today Y-M-D





6 Month Follow-up Assessments

The following questionnaires are completed 6 months after ACU admission +/- 2 weeks:

- + SF-36
- + ADL (Activities of Daily Living)
- + IADL (Instrumental Activities of Daily Living)
- + Questionnaires may be administered via a telephone call or in person.
- + Keep the completed questionnaires with your study documents.
- + Questionnaires may be completed over several calls or visits if necessary.
- + Of the three questionnaires the SF-36 is the most important.

NOTE: Late data is better than missing data.

Please make every attempt to complete the questionnaires, even if outside of the time parameters.



Guide to 6 month Follow-up forms

The following table provides a variety of patient outcome scenarios and a guide to which 6 month follow-up forms need to be completed in REDCap.

Scenario	Survival Status	SF-36	ADL	IADL
Patient died in ACU/Hospital (death date/time recorded on Hospital Overview form.	X	X	X	X
Discovered patient died AFTER hospital discharge, but BEFORE trying to contact the patient/alternate.	√	X	X	X
Learned that the patient died from the alternate.	√	X	X	X
Tried but never reached either the patient or alternate	√	X	X	X
Reached the patient/alternate and only completed one questionnaire	√	V	√	√
Reached the patient/alternate and completed ALL questionnaires	√	V	√	V





SAEs

- + Worksheets are provided to assist with data collection if you wish to use them.
- + SAEs must be entered in REDCap.

Name of Responsible Investigator	:					
Institution:						
Report completed by:						
Date of Report: ☐ Initial ☐ Follow-up# ☐ Final						
Patient Information						
Patient RZ #:	Age:	Sex:	Date patient started study			
	.	☐ Male	intervention:			
☐ Female						
Event Information						
Event Onset Date/time:	ent Onset Date/time: Name of Event:					
Date Became Aware of Event:						
Description of Event:						

Serious Adverse Event





Patient ID:

SAEs

- + A summary of the SAEs entered is located at the bottom of the grid.
- + Information displayed: Event Onset Date, Name of Event, Report type.
- + Each event should be entered as a single SAE and the form updated as new information becomes available.







Questions



