



Example Detailed Codebook for Project Design

Variable	Purpose	Repeated?	When?				Final Check	Who?	Form	Identifying	Field Type	restrictions
			Consent	t1	t2							
record_id	key identifier	no	X				Auto Generated	consent		number		
eligibility	project tracking	no	X				RA	consent		yes/no		
consent	project tracking	no	X				RA	consent		yes/no		
first_name	contact info	no		X			patient	Demographics	yes	text box		
last_name	contact info	no		X			patient	Demographics	yes	text box		
dob	modifier	no		X			patient	Demographics	yes	date (YMD)	<1980/01/01	
weight	modifier	yes		X	X		patient	Weight		number	<300	
email	contact info	no		X			patient	Contact_Info	yes	email		
phone	contact info	no		X			patient	Contact_Info	yes	phone number	w/ area code	
injury_size	modifier	no		X			Radiologist	Injury		radio button	0, small fracture 1, medium fracture 2, large fracture	
painscale_severity	main outcome	yes		X	X		RA, from paper	Painscale		slider (VAS)	0-100	
painscale_freq	main outcome	yes		X	X		RA, from paper	Painscale		slider (VAS)	0-100	
painscale_when	main outcome	yes		X	X		RA, from paper	Painscale		slider (VAS)	0-100	
backactivity	2nd outcome	no			X		RA, from paper	Back_Activity		radio button	0, sometimes 1, always	
labvalue_rom	2nd outcome	yes		X	X		Lab tech	Labs		number	<180	
labvalue_bw	2nd outcome	yes		X	X		Epic	Labs		number	<200	
data_reviewed	project tracking	no				X	RA	review		yes/no		

*** other things to think about, branching logic requirements or required fields



Example Detailed Codebook for Project Design

- **EXAMPLE:** You will be recruiting patients in the ER following an ankle fracture. While they are in the ER and following obtaining consent you will gather patient demographics and ask some questions about their pain and you will collect some labs. There will then be a one month follow up where you will repeat the pain questions, labs and ask an additional back to activity question.
 - What should we collect?



Example

- **EXAMPLE:** You will be recruiting patients in the ER following an ankle fracture. While they are in the ER and following obtaining consent you will gather patient demographics and ask some questions about their pain and you will collect some labs. There will then be a one month follow up where you will repeat the pain questions, labs and ask an additional back to activity question.
 - Start with an exhaustive list of all the variables you will collect in your study

Variable
record_id
eligibility
consent
first_name
last_name
dob
weight
email
phone
injury_size
painscale_severity
painscale_freq
painscale_when
backactivity
labvalue_rom
labvalue_bw
data_reviewed



Planning: Repeated Variables?

Once we have our list of variables and formats we need to understand the purpose of each variable, when each variable will be collected and by who.

- Some variables will only need to be collected once while others numerous times
- Notice some variables are for project tracking only!
- Be very specific about your who
 - RA directly versus from paper
 - Survey of Patient at home or in person
- Repeat variables
 - At what times specifically?
 - Do this for each variable

Variable	Purpose	Repeated?	When?			Final Check	Who?
			Consent	t1	t2		
record_id	key identifier	no	X				Auto Generated
eligibility	project tracking	no	X				RA
consent	project tracking	no	X				RA
first_name	contact info	no		X			patient
last_name	contact info	no		X			patient
dob	modifier	no		X			patient
weight	modifier	yes		X	X		patient
email	contact info	no		X			patient
phone	contact info	no		X			patient
injury_size	modifier	no		X			Radiologist
painscale_severity	main outcome	yes		X	X		RA, from paper
painscale_freq	main outcome	yes		X	X		RA, from paper
painscale_when	main outcome	yes		X	X		RA, from paper
backactivity	2nd outcome	no			X		RA, from paper
labvalue_rom	2nd outcome	yes		X	X		Lab tech
labvalue_bw	2nd outcome	yes		X	X		Epic
data_reviewed	project tracking	no				X	RA



Planning: Repeated Variables?

- Once we know which variables are being collected at what time periods we can now bucket them into forms
 - ones with common times and who? can be grouped together
- Weight we had included in the demographics form at first, but needs to be repeated so it has to be in its own form
- Also notice Back to Activity is in it's own form because this question only occurs at t2 while the rest of the Pain scale exists at both times.

Variable	Repeated?	Consent	t1	t2	Final Check	Who?	Form
record_id	no	X				Auto Generated	consent
eligibility	no	X				RA	consent
consent	no	X				RA	consent
first_name	no		X			patient	Demographics
last_name	no		X			patient	Demographics
dob	no		X			patient	Demographics
weight	yes		X	X		patient	Weight
email	no		X			patient	Contact_Info
phone	no		X			patient	Contact_Info
injury_size	no		X			Radiologist	Injury
painscale_severity	yes		X	X		RA, from paper	Painscale
painscale_freq	yes		X	X		RA, from paper	Painscale
painscale_when	yes		X	X		RA, from paper	Painscale
backactivity	no			X		RA, from paper	Back_Activity
labvalue_rom	yes		X	X		Lab tech	Labs
labvalue_bw	yes		X	X		Epic	Labs
data_reviewed	no				X	RA	review



Planning: Detailed Code Book

Other things to consider

- Is the variable identifying?
- What type of field will it be? Response Format
- Are there restrictions to that variable
- Branching logic?
- Required field?

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Setting up repeated measures: longitudinal

- Now that we know which variables are in which forms we can define what time we are collecting them at
- Longitudinal: Define Events
- Longitudinal: Designate instruments for events
- Now only collecting variables when needed and there is a flow for data collection

Data Collection Instrument	Consent (1)	T1 (2)	T2 (3)	Final Check (4)
Consent	✓			
Demographics		✓		
Weight		✓	✓	
Contact Info		✓		
Injury		✓		
Pain Scale (survey)		✓	✓	
Back Activity			✓	
Labs		✓	✓	
Review				✓

	Event #	Event Name	Custom Event Label (optional)	Unique event name (auto-generated)
	1	Consent		consent_arm_1
	2	T1		t1_arm_1
	3	T2		t2_arm_1
	4	Final Check		final_check_arm_1