

**Report request basics.** Analysts in the Lifespan Information Services Department provide clinical data to researchers when prerequisite actions have been met by the investigator:

- **A service request** has been received for the data extract (see Appendix A for instructions).
- **IRB approvals** have been acquired for the research project (we require copies of the IRB Approval letter, the HIPPA Waiver of Authorization, and a study protocol; please email to [sreinert@lifespan.org](mailto:sreinert@lifespan.org)). If you need help with the IRB process, please contact Janice Muratori ([jmuratori@lifespan.org](mailto:jmuratori@lifespan.org)) or Cynthia Chrostek ([cchrostek@lifespan.org](mailto:cchrostek@lifespan.org)) in the Data Security group of Lifespan's Office of Research Administration.

Clinical data from Lifespan's four affiliate hospitals is available for admission/visit-dates beginning 1/1/2000. Data is stored in two repositories:

- **The Legacy Data Warehouse (LDW).** This repository spans 1/1/2000 – 3/28/2015. It contains demographics, diagnoses, procedures, lab-tests, vital-signs (limited years), medication administration (limited years), and other clinical data.
- **The LifeChart (Epic) Clarity database.** Data is available from the day LifeChart went live, 3/29/17, to the present. The full breadth of data captured in the Epic clinical system is potentially available for extraction for research purposes, including: demographics, diagnoses, procedures, lab-tests, vital-signs, social history, notes, and data captured via flowsheets

Where possible, investigators should limit their data requests to one of the two repositories. Requests spanning the divide date of 3/29/2015 require two dataset-construction processes: (1) the process of identifying patients with data in both the pre- and post-3/29/2015 volumes, and (2) the process of mapping, and then appending, the pre and post data to form a single dataset. These steps are effort-intensive, and will add substantially to the time of delivery of your research data.

This form is organized to guide you through specifying the two principal components of your research dataset: the **selection criteria** that defines the characteristics of your research subjects, and the **data fields** that you want presented for each subject meeting the selection criteria. Please complete each section and include codes as indicated for diagnoses and procedures. Please leverage the resources listed below should you need help in confirming the correct ICD-9, ICD-10, or CPT diagnosis/procedure codes. Taking the time to ensure you have the correct codes can dramatically reduce the time it will take us to deliver the data you require. Changes to a specification after analysts have begun work can result in substantial delays in the turn-around time of your request.

**Resources:** Make sure to specify to these staff whether you are seeking codes for the Epic system, the pre-Epic period, or both.

- **Lab test codes** (not pre-listed on the form below): Monica McDougal (3-4276, [mmcdougal@lifespan.org](mailto:mmcdougal@lifespan.org)) and Keleigh Fowler (3-4218, [kfowler@lifespan.org](mailto:kfowler@lifespan.org)). Specify that you need "observation codes" for LDW lab data, and "component IDs" for LifeChart lab data.
- **Diagnosis and Procedure Codes:** Donna Corbani (4-6303, [dcorbani@lifespan.org](mailto:dcorbani@lifespan.org)); ... See also the coding tool on the *Employee Tools* page of the Lifespan Intranet (<http://intra.lifespan.org/app/icd9/>), and many other tools are available on-line as well.

**Selection Criteria:**

1. Start- and end-dates defining the period of data extraction: \_\_\_\_\_

2. Which Lifespan affiliate hospitals to include:

- Rhode Island Hospital
- The Miriam Hospital
- Newport Hospital
- Bradley Hospital
- Gateway

3. Range of patient ages to include in extract: \_\_\_\_\_

4. Which patient types to include:

- Inpatients
- Outpatients
- Emergency patients
- Observation patients

Comments: \_\_\_\_\_  
\_\_\_\_\_

5. Patient must have had the following diagnoses added to their hospital record to be included in extract:

- Must be principal diagnosis to qualify
- Can be any final diagnosis to qualify

Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____

6. Patient must have had the following procedures added to their hospital record to be included in extract:

- Must be principal procedure to qualify
- Can be any procedure performed to qualify

Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____

7. Any other inclusion or exclusion criteria: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Data fields to include in extract:**

**1. Demographics**

<b>Data Element</b>	<b>Select</b>
MRN	<input type="checkbox"/>
PTNO (patient number, account number)	<input type="checkbox"/>
Patient name	<input type="checkbox"/>
DOB	<input type="checkbox"/>
Encounter start date	<input type="checkbox"/>
Encounter start time	<input type="checkbox"/>
Discharge date	<input type="checkbox"/>
Discharge time	<input type="checkbox"/>
Gender	<input type="checkbox"/>
Race	<input type="checkbox"/>
Ethnicity	<input type="checkbox"/>
Admit source	<input type="checkbox"/>
Admit reason	<input type="checkbox"/>
Marital status	<input type="checkbox"/>
Financial class	<input type="checkbox"/>
Discharge disposition	<input type="checkbox"/>
ED District	<input type="checkbox"/>
Zip code	<input type="checkbox"/>
SSN	<input type="checkbox"/>
Language	<input type="checkbox"/>
Corporate ID number	<input type="checkbox"/>
Clinic code	<input type="checkbox"/>
Hospital service	<input type="checkbox"/>
LOS	<input type="checkbox"/>
Hospital (RIH, TMH, NH,Bradley)	<input type="checkbox"/>
Visit type (inpt, outpt, emergency)	<input type="checkbox"/>
Nursing station	<input type="checkbox"/>
Physician number of primary practitioner	<input type="checkbox"/>
Principal final diagnosis code	<input type="checkbox"/>
Primary payer code	<input type="checkbox"/>
Secondary payer code	<input type="checkbox"/>
Tertiary payer code	<input type="checkbox"/>
Tier 4 payer code	<input type="checkbox"/>

**Other demographics** (may not be available): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Diagnoses (Dx)

Selection:

Data elements available for extract:	Select
Dx code	<input type="checkbox"/>
Dx description	<input type="checkbox"/>
Dx priority	<input type="checkbox"/>
Dx type (admitting, final)	<input type="checkbox"/>
DX effective date	<input type="checkbox"/>
DX effective time	<input type="checkbox"/>

Extract all diagnoses for each selected encounter

Extract only the diagnoses listed here\*

Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____

\*ICD-9 codes for extracts prior to 3/29/2015; both ICD-9 and ICD-10 codes for extracts after 3/28/17.

**Note: DX code-types in Epic:** The following diagnosis types are available in the Epic (LifeChart) system. We find Billing Diagnosis to be the most comprehensive category, but for some research questions one of the other types may be more suitable. Please use the blank lines provided to relate your specific needs regarding diagnosis-type.

- (1) Clinical diagnosis – this includes all diagnosis related to orders placed during the visit as well as the visit diagnosis and/ or ED Clinical Impressions.
- (2) Billing Diagnosis – these are the diagnosis that show up on the bill for a specific patient visit.
- (3) Patient problem list – all problems that the patient is or has been treated for in any/all visit, plus problems discussed but not treated by Lifespan that are active during the time of the visit
- (4) Visit problem-list - all problems that the patient was treated for in this visit
- (5) Past Medical history – as recorded during this visit
- (6) Referral – diagnosis referenced in a referral
- (7) Reason-for-Visit or Chief Complaint – admitting diagnosis/reason

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3. Procedures

Data elements available for extract:	Select
Procedure code	<input type="checkbox"/>
Procedure description	<input type="checkbox"/>
Procedure priority	<input type="checkbox"/>
Procedure performing clinician	<input type="checkbox"/>
Procedure effective date	<input type="checkbox"/>
Procedure effective time	<input type="checkbox"/>
Procedure location	<input type="checkbox"/>

**Selection (Note: always enter *both ICD and CPT codes* for procedures coded via both schema)**

- Extract all procedures for each selected encounter
- Extract only the procedures listed here (use CPT and-or ICD-9/ICD-10 codes)\*

Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____
Code: _____	Description: _____	Code: _____	Description: _____

**\*ICD-9 codes for extracts prior to 3/29/2015; both ICD-9 and ICD-10 codes for extracts after 3/28/17.**

## 4. Labs

Data elements available for extract:	Select
Lab-test code	<input type="checkbox"/>
Lab-test description	<input type="checkbox"/>
Lab-test collection date	<input type="checkbox"/>
Lab-test collection time	<input type="checkbox"/>
Lab-test performance date	<input type="checkbox"/>
Lab-test performance time	<input type="checkbox"/>
Lab-test result value	<input type="checkbox"/>
Lab-test abnormal indicator	<input type="checkbox"/>

Select the lab test to be included in the extract by checking the box to the right of the lab-test name:

Legacy DW OBSV_CD	LifeChart COMPONENT_ID	Lab-test	√	Legacy DW OBSV_CD	LifeChart COMPONENT_ID	Lab-test	√
1001460	1558187	Venous pH		1001300		LDL	
1003650	1577068	Venous PCO2		1001301	1510706	Chol HDL Ratio	
1003640	1558189	Venous PO2		1007340		Hours Fasting	
1003645	1558190	Venous O2 Sat		1000620	1557760	Cholesterol Level	
1003700	1596	Venous TCO2		1001080	1726268	HDL	
1006065	552	% O2 Venous		1001800	1552156	Triglycerides	
1006070		Oxygen Source Venous			553	PTT	
1007295	1719	Flow Rate Venous			1510758	APTT	
1001440	1534116	Arterial pH			1526776	INR	
1001420	1534119	Arterial PCO2			1526776	PT/INR	
1001960	1534120	Arterial PO2		1004430	1526466	FSH	
1000140	1534122	Arterial O2 Saturation		9021000	1143, 16501348	Prolactin	
1001940	1534125	Arterial HCO3		1001700	1534098	Sodium	
1003690	516	Arterial TCO2		1001520, 10062, 1006325	1141	Potassium	
1006055	547	% O2 Arterial		1000580	1534101	Chloride	
1006060		Oxygen Source Arterial		1000640	1526212	CO2	
1007290	857	Flow Rate Arterial		1000900	1510655	Glucose	
2000150		RDW			1577798	Uric Acid	
2001330	1558101	Absolute Neutrophil			1510512	Ethanol Level	
10061, 1000764, 1000754	1526296	Creatinine Level					
1000270	1810002	Bili Total					
2001350	1534444	Absolute Lymphocyte					
20002, 2000230	1810894	WBC					
20038, 2000820	1577116	Platelet 1810585					
2000210	1534435	Hemoglobin					
2000220	1534436	Hematocrit					
2000270		Bilirubin					
1940070	1557977	Lactate					
1001820	1558175	BUN					

List codes and descriptions of required laboratory tests that are not listed above here:

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## 5. Vital Signs

Data elements available for extract:	Select
Vital sign code	<input type="checkbox"/>
Vital sign description	<input type="checkbox"/>
Vital sign collection date	<input type="checkbox"/>
Vital sign collection time	<input type="checkbox"/>
Vital sign result value	<input type="checkbox"/>

Select the vital signs to be included in the extract by checking the box to the right of the vital-sign name:

LDW OBSV_CD	LifeChart FLO_MEAS_ID	Vital Sign	√	LDW OBSV_CD	LifeChart FLO_MEAS_ID	Vital Sign	√
1002	5	Blood pressure				ICP	
NRVSBPMETHOD	301310	BP Method				Intr Abd Psr	
NRVITBP1SITE	301300	BP Site				Mean PAP	
NRVITPOSBP1		BP Position				PAP	
1006	8	Pulse				Cardiac Pattern	
NRVITPULSST1	301230	Pulse Site				PCWP	
1007	9	Respiratory rate				PIP	
1001	6	Temp F				Pain Scale T	
NRVITTEMSITE	7	Temp Site				Adm Wt-Kg/Gr	
WT OBTAINED	3041404701	Wt Obtained				Head Circum	
NRADMWTOZ	14	Adm Wt-Oz				FHR	
NRADMWTLB		Adm Wt-Lb				Adm Ht-M/Cm	
HEIGHT - CM	11	Ht - Cm				PEWS	
HEIGHT - FT		Ht - Ft				CPP	
HEIGHT - IN		Ht - In				Cardc Indx	
HEIGHT - MET		Ht - Met				Cardc Outpt	
HT OBTAINED	3041457801	Ht Obtained				CVP	
NRPT BMI	301070	ADM BMI				ICP	
NRVSPNSCALE	13	Pain Scale				Intr Abd Psr	
NRVITPNSCLTY	3040100009	Pain Scale Type				Card Ectopy	
NRVSPNSITE	301090	Pain Location				ETT Size	
NRVITO2DLVRY		O2 Delivery				IABP Ratio	
NRVITO2SAT	10	O2 Saturation		-			
NRVITONVENT		On Vent					
301250		MAP 1					
	10	SpO2, or O2 Saturation, Pulse Oximetry					
	301250	R MAP A-LINE					

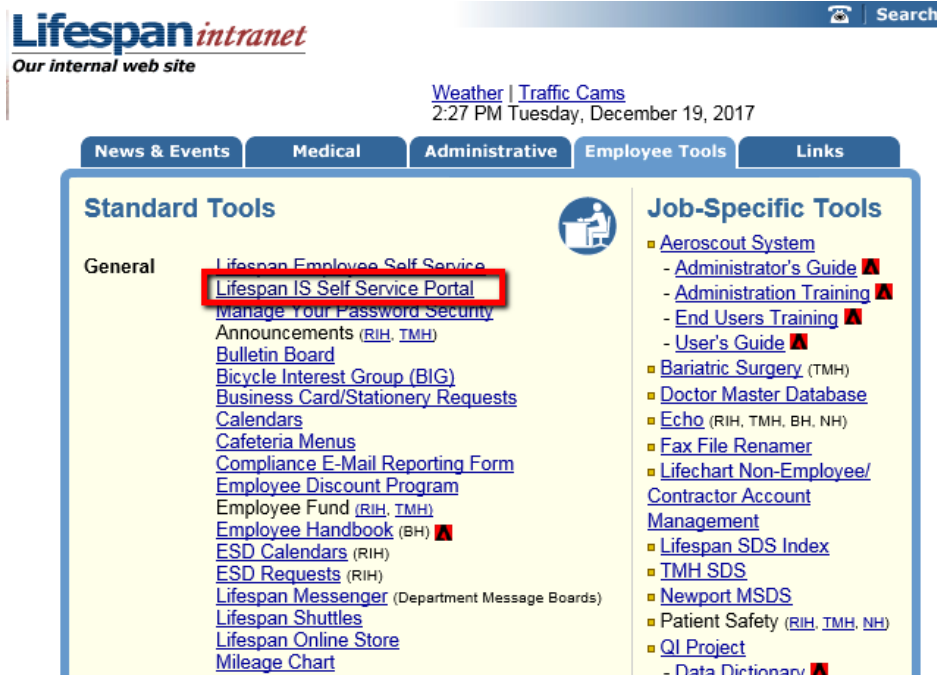
Note: For O2 Saturation and “SpO2” (peripheral capillary oxygen saturation), use “Pulse Oximetry” = 10.





### Appendix A.

Please follow the instructions below to complete a Service Request for a research report/extract/BPA. Follow the selections shown in the red frames. On the last screen shown select “Research” as shown, then scroll down on that page and respond to all required (asterisk-marked) fields. When finished, click the Save button at the top of the screen.



### Select Lifespan Report Request



Complete the first three prompts as shown here:

Request Details

\* Requested Reporting Tool: Lifechart Crystal / Clarity

\* Type of Request:: New Report

\* Purpose of Data Requested:

- Organizational Finance
- Research
- Accreditation/Certification

Complete remaining details (\* = response required), including “Contact Details”, then click “[Review & Submit](#)”.