



SPRUCE Data Extract Instructions

AdaptX SPRUCE helps care teams shift away from traditional climate-damaging anesthesia gasses without adversely affecting the quality or efficiency of patient care. At the same time, SPRUCE allows clinical leaders to address variations in practice across physicians. By providing each clinician with access to their own real-world data, leaders can rapidly enlist the entire team in their emissions reduction programs. Your help makes this possible!

We'll use these 13 well-defined extract files to deploy your SPRUCE *Mission Control Center*, populated with real time statistical process control charts your team will use to monitor and adapt their practices to reduce your facility's carbon footprint.

Please see the spreadsheet [AdaptX - SPRUCE Table Requirements.xlsx] for detailed technical requirements and how to create these files in the proper format. Each tab has detailed instructions for creating tables that provide the required fields.

It is important that all fields are provided. If there are no data available for the field, please use the default values specified to populate the field. Because this project involves multiple hospitals, column names must be identical to the field names provided in the specification. If there are instructions on what field values are required, those too need to be an exact match.

Instructions for Generating Data Extracts

Use your internal clinical reporting system to create comma delimited files that adhere to the specs outlined in the accompanying [AdaptX - SPRUCE Table Requirements.xlsx] requirements document.

The scope of this data extract should cover the time period from 1/1/2019 to present.

Follow these steps to develop the export files required by AdaptX:

1. Write queries from your internal reporting tool(s) to create flat files with the same content that can be found on the tabs in the [AdaptX - SPRUCE Table Requirements.xlsx] document.
2. Be sure to use the field names specified in the [AdaptX - SPRUCE Table Requirements.xlsx] document and adhere to the data types and default values on each tab.
3. When specific field values are called out, use those names for field values, not your internal names for these items.
4. Some additional instructions for developing your CSV export files:
 - a. File Names: <file_name>.csv. File names are designated in the [AdaptX - SPRUCE Table Requirements.xlsx] tabs.
 - b. Delimiter: Fields must be comma delimited.
 - c. Headers/Field Names: The first row in the extract should be field names; do not add blank lines or document headers above the first row or below the last record.

- d. Text Fields: Be sure string fields are surrounded in “quotes” and special characters are escaped.
 - e. Data Types: Strictly follow data types from the [AdaptX - SPRUCE Table Requirements.xlsx] document.
 - f. Null or blank values:
 - i. All fields should be provided AND have a value for every record. When field values are not populated from the source of record, please populate instead with the default values indicated in the [AdaptX - SPRUCE Table Requirements.xlsx] tabs. It is worth noting that many of the default field types are NULL; please use that as the default value when indicated.
 - ii. Please keep a list of all fields for which you do not have data and have instead populated the entire column with a default value. When you upload your extract, please provide this list to your AdaptX contact.
 - g. Datetime:
 - i. Return datetimes in format: “YYYY-MM-DD HH:MM:SS”
 - h. File Encoding: Files should be encoded UTF-8.
 - i. End Product: Your end product must be a zip archive containing a folder named YYYYMMDD which contain 13 flat files that follow the specifications in [AdaptX - SPRUCE Table Requirements.xlsx]. The zip file should be named with the following format: <hospital_name>_SPRUCE_YYYYMMDD.zip
 - j. Updates:
 - The initial load of data sent to AdaptX will be a bulk load of several years of data.
 - Once that bulk load has been properly ingested, daily updates will begin. Please send a new zip file for every update with incrementing dates.
 - The date in the file name should represent the date the data was extracted, not the max date in the data itself.
 - k. Lag:
 - i. All daily updates should look back 90 days to present.
 - ii. Your data will reflect records back to 1/1/2019.
 - iii. Daily updates that look back 90 days will allow AdaptX to ensure that your data includes changes and updates to records that were present but not complete in an earlier update.
5. Your queries should be used to produce scheduled extracts to be delivered to your designated SFTP file server, ideally through an automated process created by yourself or your IT department.
6. SFTP Instructions will be provided in separate documentation when you are ready to begin the process of transferring files.

Thank you for your expertise, time, and your role in making Project SPRUCE a resounding success. Together, we can make a significant positive impact on reducing your system's carbon footprint which will be good for your patients, your facility, and the planet at large.

We're here to help if you need assistance connecting to our secure storage network; please email us at data@AdaptX.com.