CUSTOM REPORTING
USE CASES

CUSTOM REPORTING — WHAT'S POSSIBLE?

- Various tools can be used to extract data from a database according to specific criteria, for example:
    - SAP's Crystal Reports
    - Microsoft SQL Server Reporting Services
    - SQL Queries exported to CSV or Microsoft Excel
- Reports can be designed to prompt for selectable parameters for flexibility. Some common examples are a specific date range or specific office location.
- Once the data is selected, it can be grouped, sorted, and have summary calculations (e.g. counts, totals, averages, percentages, etc.) performed if desired.
- Reports can be printed or exported to another application, for example Microsoft Excel.
- Additionally, the data can be displayed in graphs or charts.
- Note that although many of the examples list below are healthcare related, all businesses can benefit from custom reports.
- Most of the examples below have personal data blacked out for privacy.

POTENTIAL CHALLENGES

- Clinical data is stored in EMR tables and patient demographic data is in PM tables, so your standard EMR/PM vendor "canned" reports don't give you the information you need.
- Your practice has thousands of patients to review and you need to react quickly.
- It would take your staff hours or days to identify and/or summarize data manually and they already have other daily duties.
- You need to gather and summarize the same data on a regular basis.

USE CASE 1 – IDENTIFYING A SPECIFIC PATIENT POPULATION

CLINICAL NEED EXAMPLES

- Recalls (medications, implants, etc.) You are notified by a manufacturer that a particular item is being recalled and you need to quickly identify all the patients who may have this item, so you can contact them to follow-up with appropriate care.
- Study or procedure candidates – A pharmaceutical company is prompting your practice to participate in a study and you need to identify a group of potential study participants based on very specific criteria (e.g. age, diagnoses, vitals – e.g. weight, blood pressure, lab results - e.g. cholesterol values)
- Follow-up notification
- Population Health group identification (e.g. patients with particular chronic conditions)

SOLUTION EXAMPLE – TCC POTENTIAL RENAL DENERVATION PATIENTS

A new procedure called Renal Denervation was identified for patients with uncontrolled hypertension and Tri-City Cardiology needed to identify patients who might be potential candidates for this new procedure according to this complex set of criteria.

- Between ages 18-80 years
- Any blood pressure measurement with systolic > 160 and diastolic > 90 in the past year and last blood pressure measurement with systolic > 140 and diastolic > 90
- Hypertension diagnosis
- Currently on 3 or more anti-hypertensive medications

This Crystal Report allows the user to specify a date range of the patient's last visit. The calendar icon allows the user to click on a calendar date to input a value.

This is a screen shot of a section of the report. It gives specific clinical data for a potential patient (e.g. last recorded blood pressure, specific hypertension diagnosis code, current hypertension medications.)

Potential Renal Denervation Patients
with last office visit between 1/1/2016 - 3/1/2016
Additional Criteria:
Age - 18-80 years
any BP measurement - systolic > 160 and diastolic > 90 in the last year
and last BP measurement - systolic > 140 and diastolic > 90
Hypertension diagnosis
Current medication list includes 3 or more anti-hypertensive medications

Patient Name	DOB:	Patient DOB	Age: 79	Female

Last Visit Date: 02/24/2016   **Default Provider:** Physician   **Last recorded BP:** 162/102

Htn Diagnoses: **Current Hypertension Medications:**
401.1   Hypertension, Benign   Lotrel 5 mg-10 mg capsule
                                                      hydrochlorothiazide 12.5 mg tablet

Patient Name	DOB:	Patient DOB	Age: 68	Female

Last Visit Date: 01/21/2016   **Default Provider:** Physician   **Last recorded BP:** 174/92

Htn Diagnoses: **Current Hypertension Medications:**
401.1   Hypertension, Benign   losartan 100 mg tablet
416.8   Pulmonary hypertension   furosemide 40 mg tablet
                                                      metoprolol tartrate 50 mg tablet

USE CASE 2 – IDENTIFYING QUALITY OF STAFF PROCESSES

BUSINESS NEED EXAMPLES

- Identifying incomplete visits
- Is staff filling in all required information as specified by the workflows?
- Are all staff members following required workflows?

SOLUTION EXAMPLE – SCC INCOMPLETE VISIT REPORT

Scottsdale Cardiovascular Center needed to identify incomplete visits, so providers could be tasked to complete those visits to assure completed documentation and billing.

This Crystal Report allows the user to specify the date range and which provider(s) to report on. The providers are presented as a picklist and selected using the arrow buttons between the list of available values and selected values.
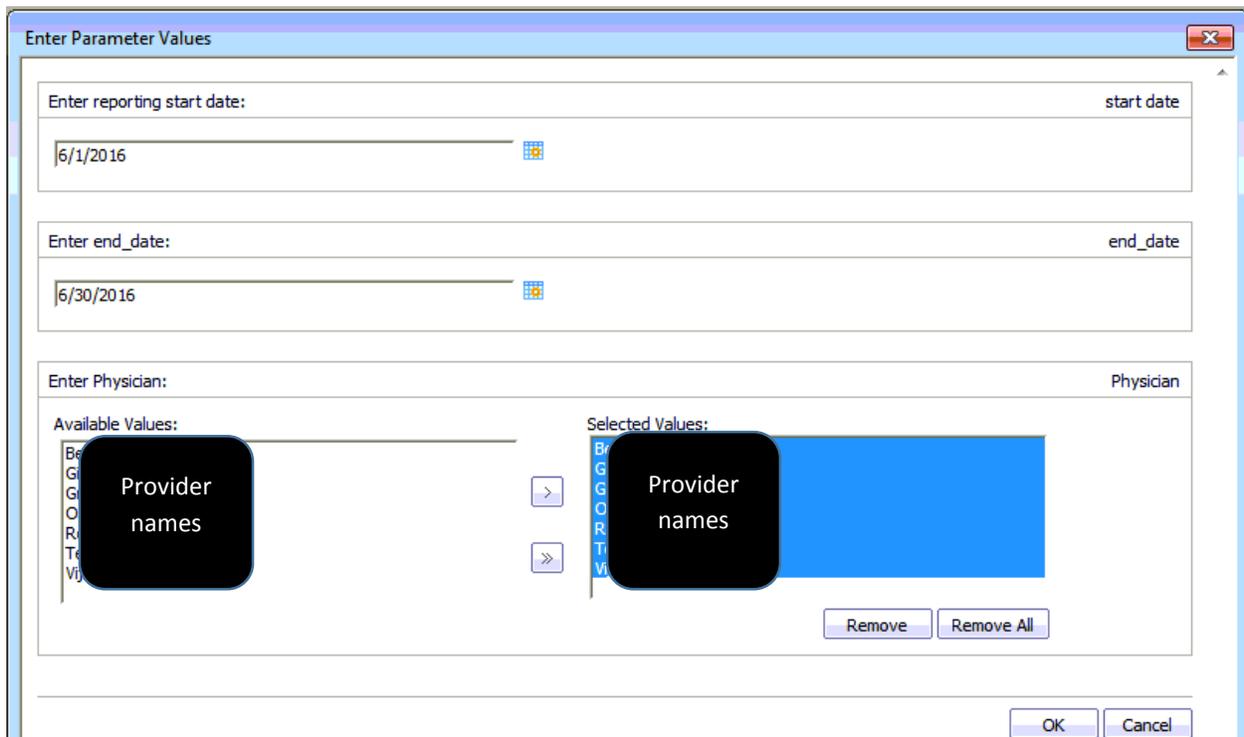
This is a screen shot of a section of the report. The incomplete visit items are grouped by provider with a page break after each group, so the report can be split up and sent to each provider to be addressed.

SOLUTION EXAMPLE – TCC ACC SCREENING QUESTIONS COMPLETED

Tri-City Cardiology expects their staff to record patient answers to a set of screening questions at each Anti-Coagulation Clinic visit. They wanted to measure compliance for each staff member, as well as overall compliance.

This Crystal Report can be run for a specified time period.

This is a screen shot of a section of the report. It lists each staff member, the total number of encounters and the total number of encounters with completed screenings. It calculates the percentage of screenings completed for each staff member and also calculates overall statistics for all staff.

ACC Screening Questions Completion for Visits
01/01/2016 - 03/31/2016

Dose Saved By	# of Encounters	# with Completed Screening ?	Percentage Complete
A[Staff member names]	176	169	96.0
C	1,288	1,274	98.9
S	1,883	1,858	98.7
S	1,514	1,498	98.9
T	1,144	1,106	96.7
Ti	1,403	1,382	98.5
Y	1,383	1,360	98.3
Overall	8,791	8,647	98.4

USE CASE 3 – CALCULATING MARKETING SUMMARIES

BUSINESS NEED EXAMPLES

- Identifying results of a marketing campaign
- List of providers you receive referrals from and numbers of referrals by month, quarter or year
- Numbers of a specific procedure or group of procedures

SOLUTION EXAMPLE - SUN DEVIL AUTO CALL TRACKING

Sun Devil Auto has marketing campaigns associated with certain phone numbers. They wanted to track call statistics by these numbers to gauge the effectiveness of a marketing campaign. Additionally, they wanted the ability to click on an individual report item and listen to the call.

The report parameters allow the user to enter a report date range and which phone numbers to include in the report.

This is a screen shot of a section of the report.

At the end of the report, summary graphs show the call breakdown by day of the week and time of day, as well as summary call statistics.
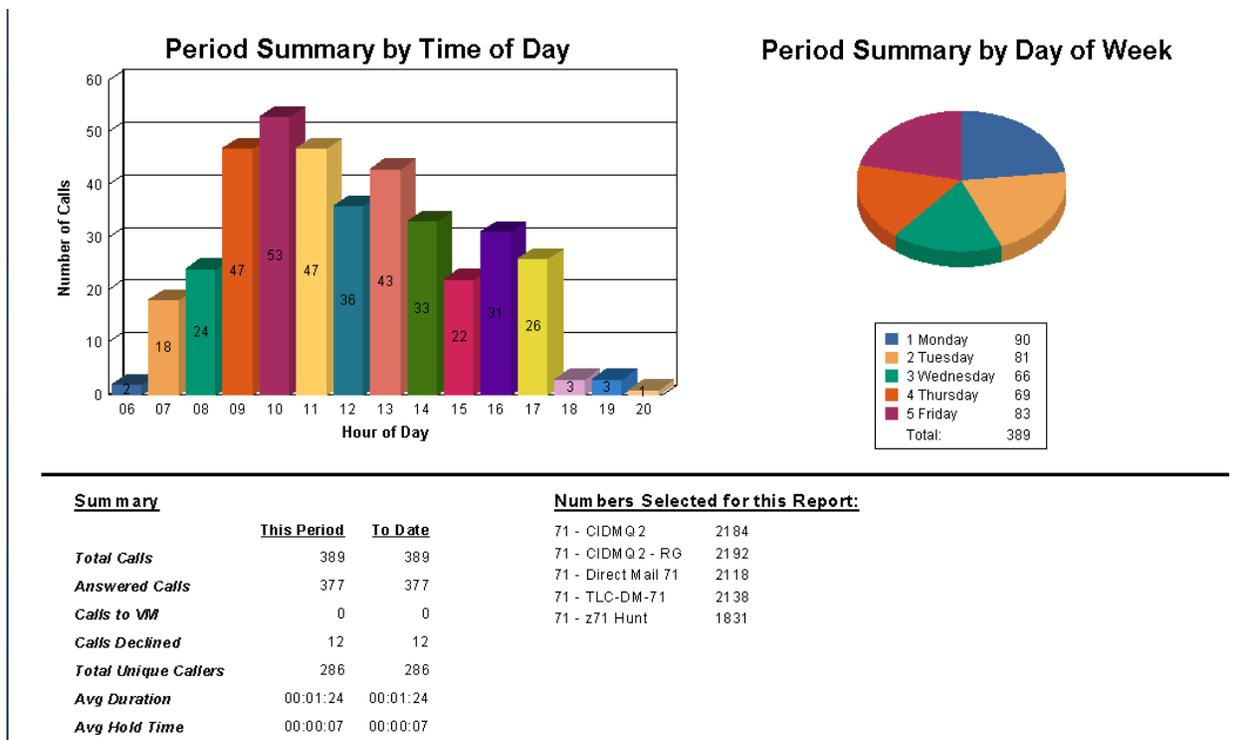
SOLUTION EXAMPLE – DPI REFERRALS COUNTS BY MONTH

Desert Pain Institute wanted to measure the number of patients referred to their practice by other providers. This report has no input parameters. This is a screen shot of a section of the report. It has monthly subtotals for each of the 12 months previous of the current date, as well a total for all 12 months. The referring providers are grouped by city.

Referral Counts by Month

				Aug-15	Sep-15	Oct-015	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Last 12 mo
Referral Self				2	2	0	4	0	6	9	2	6	0	1	0	32
Ahwatukee																
Kenneth	Ahwatukee	AZ	85048	0	0	0	1	0	0	0	0	0	0	0	0	1
M	Apache Jct	AZ	85220	0	0	0	0	1	0	1	1	0	0	0	0	3
G	Apache Jct	AZ	85220	3	1	1	1	0	0	0	0	0	0	0	0	6
J	Apache Junction	AZ	851206511	0	0	0	0	0	0	1	0	0	0	0	0	1
R	Apache Junction	AZ	852187352	0	1	0	0	0	1	1	0	0	1	0	0	4
D	Apache Junction	AZ	85218	0	1	1	0	0	0	1	0	0	0	0	0	3
V	Apache Junction	AZ	85120	2	3	1	0	0	0	0	0	0	0	0	0	6
A	Apache Junction	AZ	85120	0	0	1	0	0	0	0	0	0	0	0	0	1
Z	Apache Junction	AZ	85120	2	1	1	0	0	0	0	0	0	0	0	0	4
	Apache Junction	AZ	85220	0	0	0	1	0	0	0	0	0	0	1	0	2
B																
L	Bloomington	MN	554254516	0	0	0	1	0	0	0	0	0	0	0	0	1
C																
D	55 N Casa Grande	AZ	85222	0	0	0	0	0	0	0	0	0	0	1	0	1
F	Casa Grande	AZ	85230	0	1	0	0	1	0	0	0	0	0	0	0	2
D	Casa Grande	AZ	85222	0	0	0	0	0	1	0	0	0	0	0	0	1
Gera	Casa Grande	AZ	85222	0	0	0	0	0	0	0	0	1	0	1	0	2
Chandler																
Cheryl & Maurice	345 S Dobson Rd	Chandler	AZ	85224												

[Left portion of referral provider names and addresses obscured — labeled "Referring provider name & address"]

SOLUTION EXAMPLE – DPI FLUOROSCOPY USAGE TIME BY PROVIDER, PROCEDURE

Desert Pain Institute wanted to measure the usage time of their Fluoroscopy equipment. The usage time is recorded by patient procedure. The input parameters are a date range similar to other reports shown above. The report groups by provider, then by type of procedure with a subtotal calculated for each procedure type and physician. This is a screen shot of a section of the report.

Fluoroscopy Procedures by Provider, Procedure
for 01/01/2016 - 03/31/2016

[Physician Name obscured]

20610 - Large Joint Injection W/O US-ASC

01/05/2016	22	seconds
01/18/2016	37	seconds
01/25/2016	15	seconds
02/11/2016	18	seconds
02/11/2016	19	seconds
02/16/2016		
03/30/2016	15	seconds

20610 - Large Joint Injection W/O US-ASC subtotal time (in seconds): 126

22513 - PCVA Cerv/Thor Incl Imaging-OFC

01/08/2016	607	seconds

22513 - PCVA Cerv /Thor Incl Imaging -OFC subtotal time (in seconds): 607

22514 - PCVA Lumbar Incl Imaging OFC

01/08/2016	607	seconds
01/22/2016	6	minutes
03/18/2016	259	seconds

22514 - PCVA Lumbar Incl Imaging OFC subtotal time   (in seconds): 872

QUESTIONS TO THINK ABOUT WHEN CONSIDERING A CUSTOM REPORT

- What is the business or clinical need for the report?
- Who will need access to the report?
- When will the report be run? Is it a one-time request or something to be reported on daily, weekly, monthly, etc.?
- Where will the report be launched from? Within your EMR? Another application?
- Where is the data coming from? If the specific database tables are not known, then we recommend starting with where the data is entered into the database. Additionally, is the data used for selecting, sorting and grouping consistently entered into the database (i.e. not free-text)?
- What parameters will the user enter to limit the data returned?
- What will be final report look like? You can include a handwritten sketch if needed. Will display be simple and utilitarian (for internal use) or formal (for external presentation)?
- What will be the final format of the report be? (printed, PDF, Excel)
- What grouping, sorting or summary calculations are needed?
- What reporting tools are available? (i.e. licensed by the practice)

CONTACT INFO

DEBRA HRATKO
Director of Application Consulting
2515 W. Broadway Road, Suite 103
Mesa, AZ 85202
Direct: 480.422.1966
dhratko@isdesign.com
www.isdesign.com