

Defining Populations, Identifying Complex Patients and Using Data to Design Care Strategies

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Cherokee Health Systems
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Our Mission...

To improve the quality of life
for our patients through the blending of
primary care and behavioral health.

Together...Enhancing Life



Primary Service Area



Giving our Best for Those Most in Need

Improving Access and Outcomes for the Underserved

Calendar Year 2018

72,911 Patients Seen

383,230 Services Provided

16,690 New Patients

Strategic Emphases



- Population-based care
- Blended behavioral and primary care
- Go where the grass is brownest
- Outreach and care coordination
- Telehealth
- Training healthcare providers
- Value-based contracting
- Healthcare analytics

Populations/Communities Served

- Rural Appalachian
- Black/African American
- Migrant/Agricultural Farm Workers
- Latino/Hispanic
- Homeless
- Public Housing
- Refugee – Africa, Middle East, Eastern Europe/Russia

Managing an Assigned Population

- 35,000 assigned Medicaid lives
- Value-based contracts put us at risk (both upside and downside) for quality targets and cost targets (quality bonus and shared savings)
- Who are these patients?
- What is driving their use of services? Medical? Psych? SDOH?
- Who are the sickest and what resources do they need?
- Who are *next* sickest and what resources do they need?

Complex Adaptive Theory: Applications for PC

SIMPLE



- Recipe essential
- Recipe tested to assure replicability
- No particular expertise, knowing how to cook increases results

COMPLICATED



- Formulas are necessary
- High level of expertise in many specialized fields
- Separate parts and then coordinate

COMPLEX



- Formulas have limited application
- Expertise can help, but not key, relationships
- Can't separate parts from whole
- Every child is unique
- Outcome is uncertain

Population Health Management

Bio-Psycho-Social Assessment (BPSA)

Model description

- Biopsychosocial Algorithm of Patient Complexity
- Quantifies patient complexity from biological, psychological, and social domains
- Points assigned to conditions are combined into overall BPSA score by patient

Patient Information

Age, Income, BMI,
Language, Living
Arrangement

Appointment No-
Show Rate, Care
Plan Engagement

Claims / Utilization

Medical and
Behavioral
Diagnoses

Prescriptions, BHC
Visits, Hospital
IP/ER Use



Social Factors

Support System,
Isolation, Legal,
Culture, Access to
Health Care

Transportation,
Housing, Access to
Food, Education,
Employment

**BPSA
Score**

Patient, EHR, HIE, Claims Data...

Med (Bio)

Hypertension
Asthma
Myocardial Infarction
Cerebrovascular Disease
Diabetes
Leukemia
Low Back Pain
AIDS
Hep C
Etc.

Psych/BH

Anxiety
Trauma/PTSD
Substance Use Disorder
Major Depression
Bipolar Disorder
Schizophrenia

Social

Income below federal poverty guidelines
Homeless or unstable housing
Transportation barriers
Employment barriers
Issues with primary support system
Legal problems
Lack of access to food/clothing
Social isolation
Language/cultural barriers
Health Literacy

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Quality Metrics

<u>Measure</u>	<u>NCQA 75th Percentile (2013)</u>	<u>TennCare Target 2014</u>	<u>Proposed Target</u>
Childhood Immunization Status, Combo 10 (CIS 10)	38%	n/a	___%
Treatment for Children with Upper Respiratory Infection (URI)	90%	84%	___%
Breast Cancer Screening (BCS)	58%	55%	___%
Controlling High Blood Pressure (CBP)	63%	64%	___%
Diabetic HbA1C Testing (CDC HbA1C)	87%	n/a	___%
Diabetic LDL-C Screening (CDC LDL)	81%	n/a	___%
Postpartum Care / Visits (PPC)	71%	71%	___%
Follow up Visit Within 7 Days of Discharge from Acute MH Admission	69%	n/a	___%
Antidepressant Medication Management -Acute Phase, First 60 Days	56%	n/a	___%
Follow-Up Care for Children Prescribed ADHD Medication	46%	n/a	___%

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Optimizing EHR for Integrated Care and Population Mgmt.

Integrated
Clinical Record

Communication

Coordination

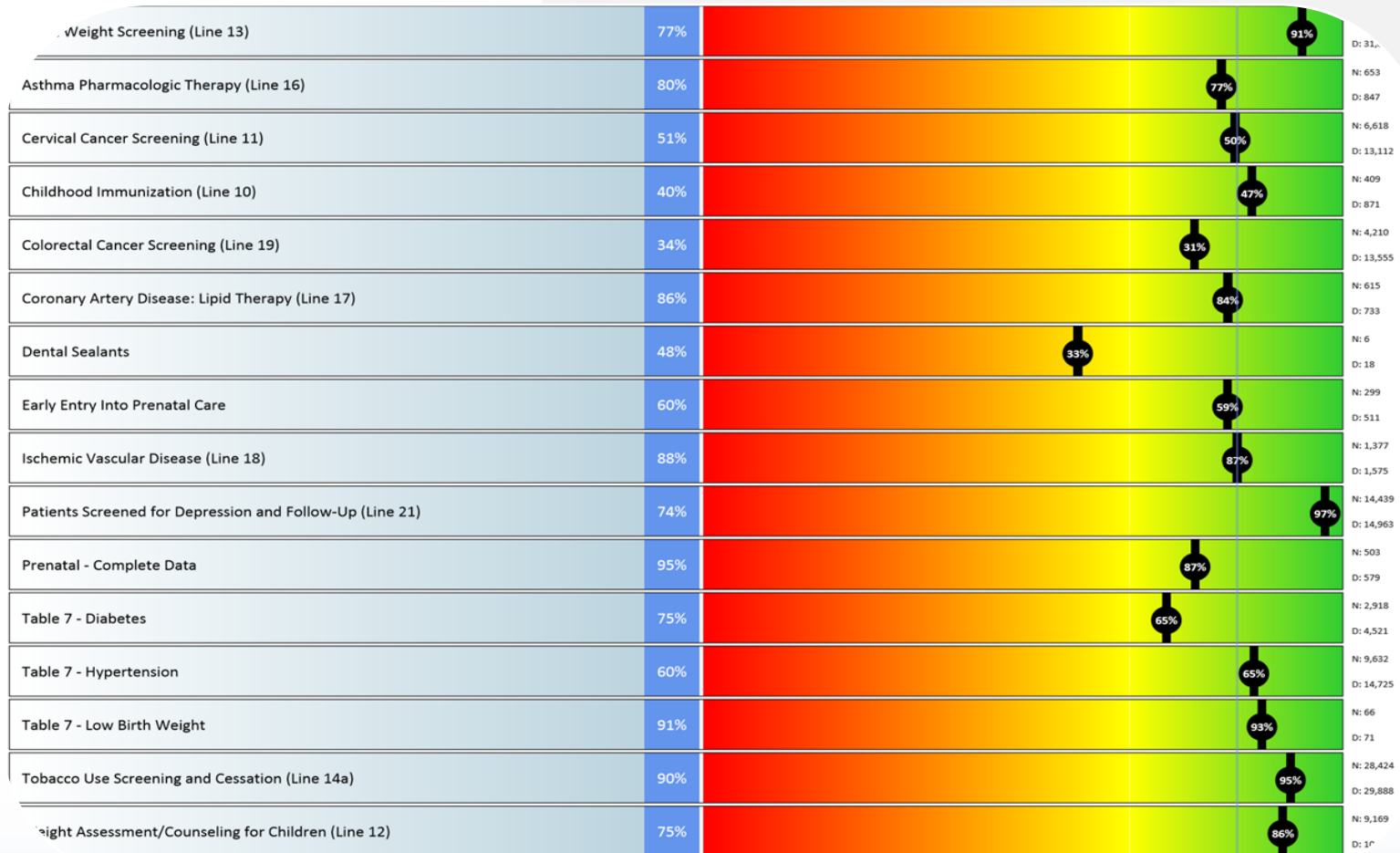
Patient
Dashboard

Multi-Level Population Health: Team Coordination And Communication

- Dashboards – CHS, Region, Clinic, Provider, Patient Dashboard
- Weekly Integrated Team Meetings
- EHR Team Care Coordination
- Daily Opportunities Reports
- Morning Huddles
- Patient Outreach
- Patient/Family



Monday Morning Coffee... and Dashboards



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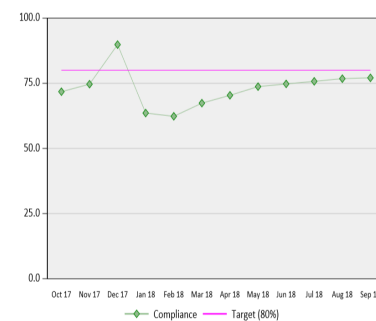
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	BMI Adult	Asthma Rx	PAP	IMM	Colorectal	CAD	Sealants	Trimester	IVD	Dep Screen	Prenatal	Diabetes	Hypertension	Birthweight	Tobacco	BMI Peds
Target	77%	80%	51%	40%	34%	86%	48%	60%	88%	74%	95%	75%	60%	91%	90%	75%
Region 1	94%	73%	60%	70%	33%	89%	25%		87%	99%	99%	59%	68%	86%	98%	89%
Region 2	94%	79%	45%	29%	40%	80%	50%		89%	99%	100%					
Region 3	95%	77%	52%	41%	32%	88%			86%	96%	100%					
Region 4	85%	75%	50%	48%	26%	86%			87%	97%	82%					
Region 5	97%	85%	57%	0%	23%	77%			85%	97%						
Region 6	100%				0%											

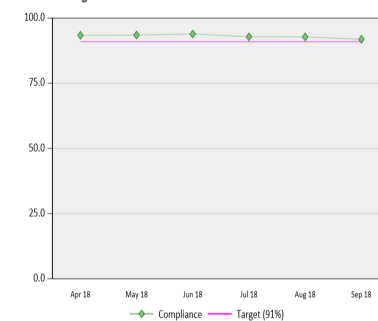
UDS Trend Report

Monthly trend over last 12 months by measure - Report Group: All CHS

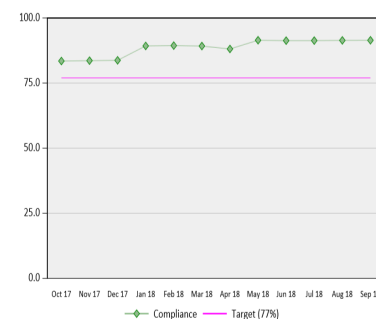
Asthma Rx



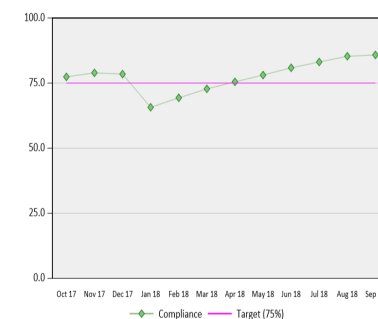
Birthweight



BMI Adult



BMI Peds



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CHS Real-Time Interactive Dashboard



[Go to BH Home Page](#)
[Go to BH Consult](#)
[Go to PC Home Page](#)
[Add Care Plan Note](#)
[Send Task](#)

Version 1.2.1 | Patient Portal Enrollment Status: **Token Issued**

Care Team	
Type	Provider
PCP	Grieve PA-C, Heather
PSY	Phillips PMHNP-BC, Rebekah Marie
TPR	FREEMAN PHD, DENNIS
TX	FREEMAN PHD, DENNIS

Future Appointments

Provider	Event	Time	Date
FREEMAN PHD, DENNIS	BH 30 Therapy	09:30	02/16/2016
Serrell MD, Paul Burt	PC Nephrology FU	10:00	03/03/2016
Phillips PMHNP-BC, Rebekah Marie	BH Est Psy 15	09:30	03/30/2016

Past Appointments

Provider	Event	Status	Date
FREEMAN PHD, DENNIS	BH 30 Therapy	Kept	01/19/2016
FREEMAN PHD, DENNIS	BH 30 Therapy	Cancelled	01/07/2016
Yates MD, James Douglas	PC Cardio Fol Up	Kept	01/07/2016

Self Management

Goal	Status	Start Date
Walk 30 mins 3 x a week	Ongoing	02/11/2016

Allergies

Description	RXN Desc
NO KNOWN DRUG ALLERGIES	

Hospital ER/Admissions (Last 90 Days)

Description	Date
None	

Care Coordination

Care Intervention
CHC outreach when indicated

Point of Care

Preventative Care

Protocol	Status	Last Date	Due Date
Mammogram	Due	07/19/2012	07/19/2013
PAP		09/18/2013	09/18/2016
Pneumococcal		11/26/2012	01/14/2034

Health Management

Protocol	Status	Last Date	Due Date
ACT	Due		02/15/2016
Eye Exam		08/25/2015	08/25/2016
Hemoglobin A1c		11/10/2015	05/10/2016
Lipid Panel		09/25/2015	09/25/2016
Microalbumin	Due	11/01/2011	11/01/2012

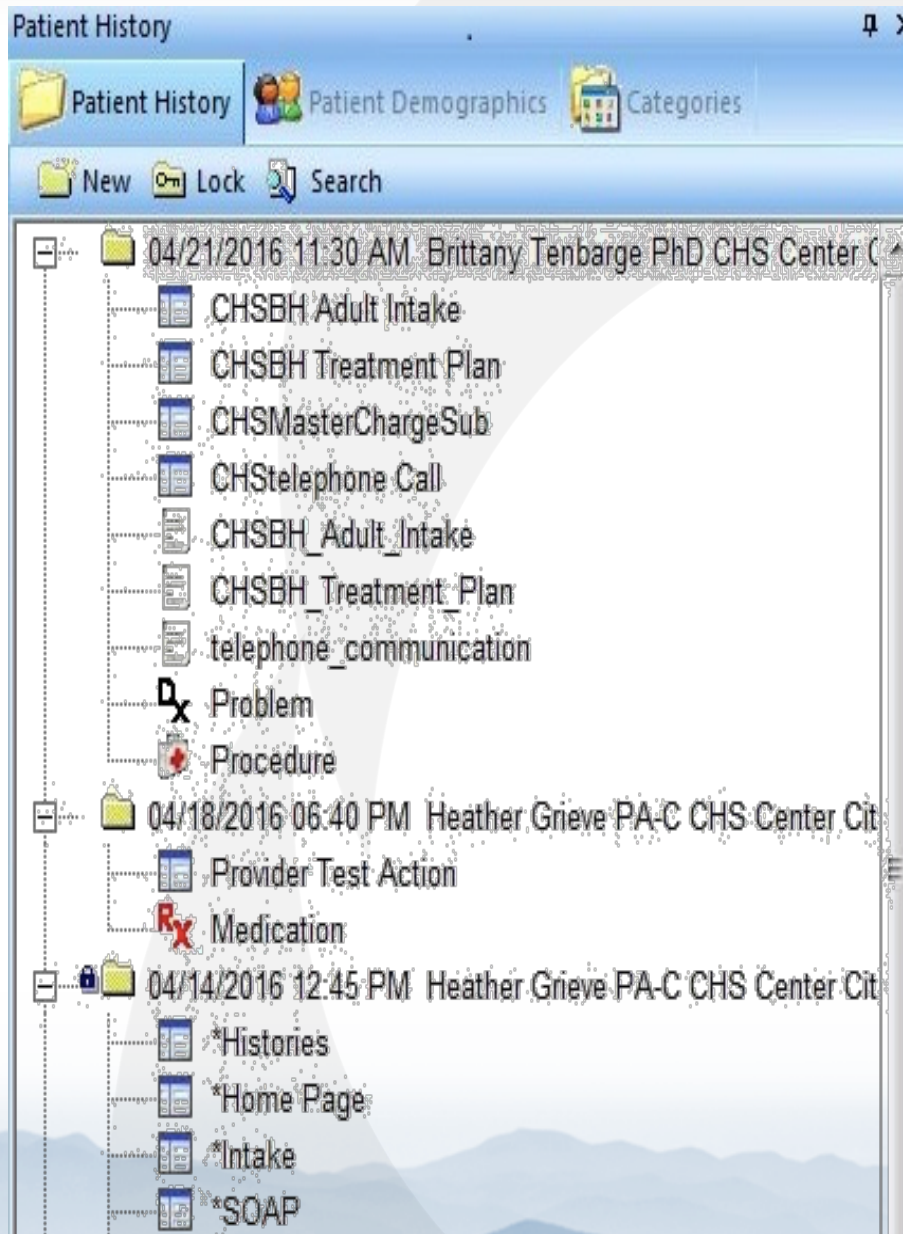
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Integrated Clinical Record



Automated tasks created for admissions, discharges and transfers
Appears on Patient Dashboard

Add ▼ Remove Edit Send Chart

CHS Web Reporter

Web Reporter 2.0 - Cherokee X

← → ↻ <https://webreporter.cherokeehealth.com:8443/index.aspx>

Apps Web Reporter 2.0 - Cherokee Health Systems Enjoy The Benefits of Cisco Email Security V Network Security and ADP CHS Outreach App Login | NextGen

Amerigroup Non-Compliant Listings - Select a Report - Filters Export Snapshot Refresh Query Guide Admin

Please select a report from the options above.

- Select a Report -
- ADD - Follow-up for Child ADHD Medication
- Amerigroup Non-Compliant Exclusions
- AMG Official Consolidated with Notes
- AMG Official Today's Appointments
- AMM - Anti-Depressant Medication Management
- AWC - Adolescent Well Child
- CBP - Controlling Blood Pressure
- CDC - A1C Testing
- CDC - Nephrology
- Consolidated - Today's Appointment
- Consolidated - Today's Appts w/ Notes
- Consolidated with Notes
- FUH - Follow-up After Hospitalization
- MMA - Asthma Medication Management
- Outreach Note Detail by User
- Outreach Note Summary by User
- URI - Appropriate Treatment of URI
- W34 - Well-Child Check (Age 2-5)

Amerigroup Non-Compliant Listings CBP - Controlling Blood Pressure Filters Export Snapshot Refresh Query Guide Admin

Region Location Prov Type Provider

All Regions All Locations All All Providers

Coordination

Other - Telephone

Call Information:

Contact type:

Urgency:

Date of call:

04/27/2016

Time of call:

2:07 PM

Spoke with:

☐ Patient

Name:

Relationship:

After hours

HIPAA

Contact Information:

Home:

☐ () -

Day:

☐ () -

Other: (this call only)

☐ () -

Alternate:

☐ () -

Ext:

Cell:

☐ () -

Email:

Preferred contact

Actions:

Schedule appointment:

☐

Send referral:

☐

Place new medication order:

☐

Adjust medication:

☐

Send test result(s):

☐

Counsel patient:

☐

Other:

☐

Details:

Completed:

☐

☐

☐

☐

☐

☐

☐

Admin Action

Release of Info Log (PHI)

Tasking:

Priority:

Normal

Send & Close

Status:

☒ Open

☐ Complete

Communication:

Comment:

Sort By:

☒ Summary

☐ Phrase

My Phrases

Manage My Phrases

Dr. Smith, I saw this pt today who reported improved mood and functioning. I see that you have a f/u with him in four weeks and I will see him concurrent with that visit.

Meds/Allergies/Chronic Problems

Review of Test(s)

This Communication History:

Date	Time	Concerns/Issues	Comments	Employee	T

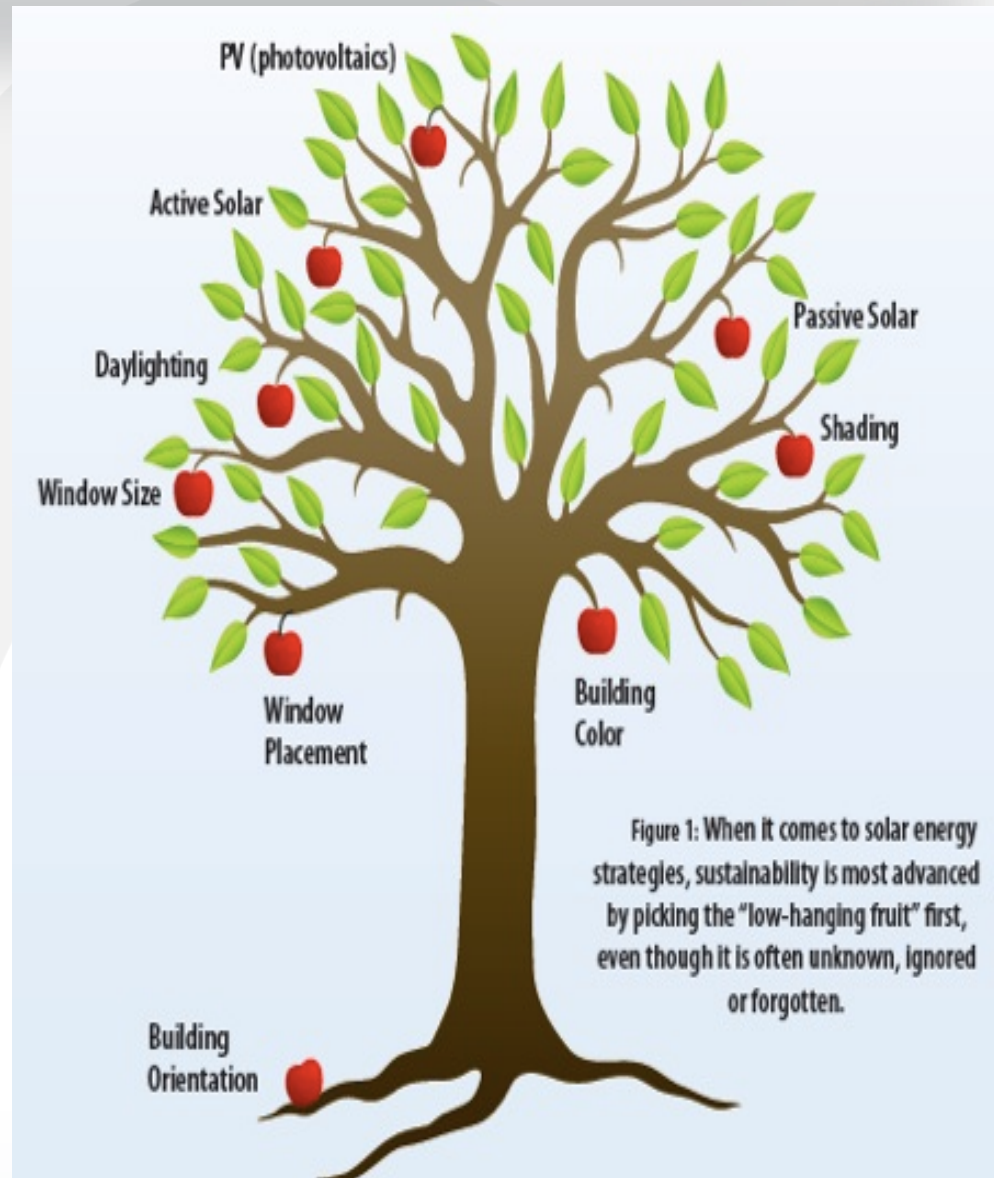
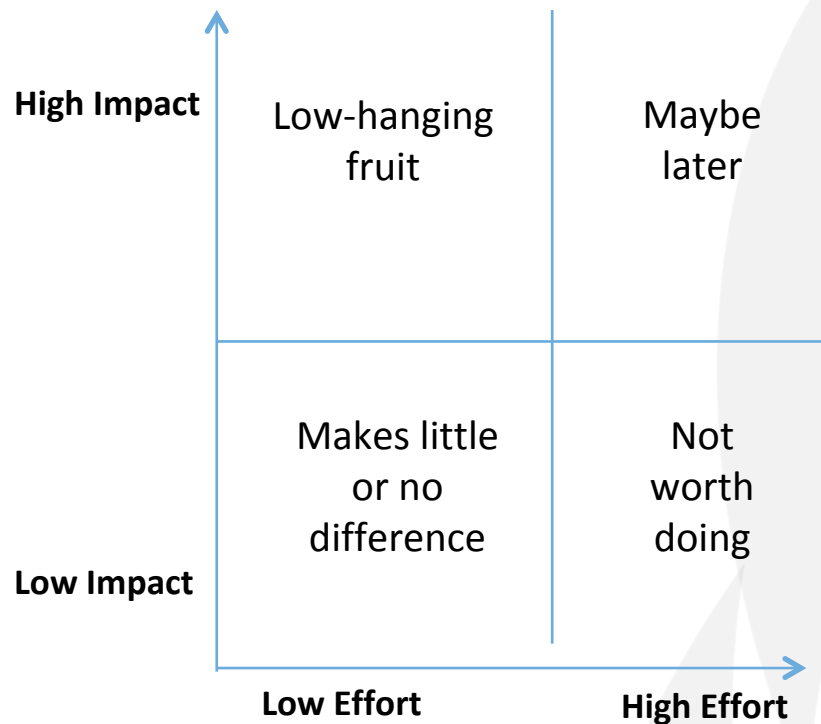
Telephone Call Summary

Save & Close

Cancel

Population Management & Care Coordination

- Daily automated non-compliant patient reports emailed to practice administrators, CHCs and BHCs



Opportunities list

1. BH Dx by CHS, Therapist, BH C, CHC
 * Therapist training * Opportunities list - specific
 * Team Review * Team huddle - etc AR

2. BH Dx by CHS, Med, CHC only

3. BH Dx by CHS, Therapist, Meds.

4. BH Dx by CHS, Med only

5. BH Dx by CHS

6. BH Dx by CHS PCP, T+L enrolled

7. BH Dx by claim - attributed but
 PC only - BAC schedule - not enrolled
 - script for CHS - intake - CHS needs, enrollment, consent.

8. BH Dx by claim - attributed but
 BH active not enrolled

9. T+L enrolled other; CHS PCP
 = Pt unaware
 = CHS unaware
 All hand on down vs.

→ telhna model - de facto

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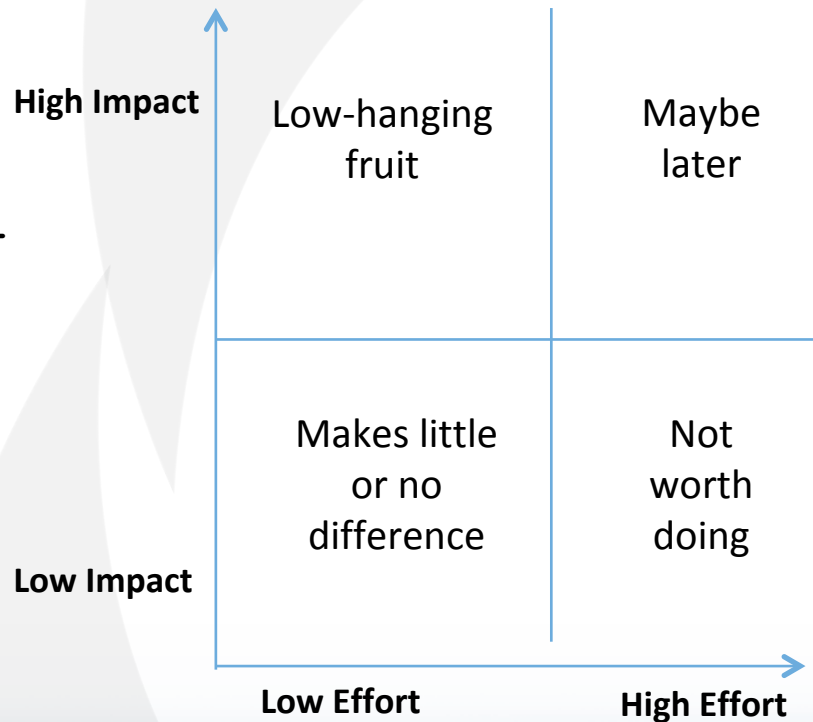
Activity

In your team groups, think about and write down:

- What data do you have available?
- Where do you think you're putting a lot of effort with low impact?
- Where can you put focused effort for high impact results?
- What is your low hanging fruit?



Feel free to write down a list or draw a chart like this and start placing sticky notes to organize!



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Thank you!

Questions?

Suggestions?

Comments?

Ideas?