The Wake County Drug Overdose Prevention and Tobacco Use Initiative

Progress Report
January – June 2019

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EXECUTIVE SUMMARY

This report represents an overview of the programmatic activities of the Wake County Drug Overdose Prevention and Tobacco Use Initiative (Initiative) during the first two quarters of CY 2019 (January-June). A few highlights are outlined below.

- Notable Numbers
  - Wake County Emergency Department Opioid Overdose Rate dropped by 18.6% as compared to NC at 5.5% for the two quarters
  - Advanced Practice Paramedics (APP) had 355 encounters for a program-to-date[1] total of 1,072
  - Opiate overdoses receiving Narcan from APP was 234 for the two quarters for a program-to-date total of 670
  - Estimated revenue generated for referrals to partners is $371,508
  - *Referral Rate for All Clients* program-to-date is 47%
  - *Show Rate for All Clients* program-to-date is 79%
  - *Number of Registered Callers to Quitline* program-to-date is 1,122
- Stories of Recovery—Larry and Megan
- Release and printing of the *Overdose Pocket Guide* for stakeholders

Although not included in this report, the Initiative's background, stakeholder engagement, program staffing and structure, funding, and evaluation design and methodology are detailed in the inaugural annual report that covered January 1-December 31, 2018*;* additionally, the Initiative successfully completed all of the objectives laid out in its "start-up" goal of creating a coordinated infrastructure in Wake County for access to prevention, treatment and recovery support services for drug and tobacco misuse in CY 2018*.* This information can be found at the following link: (http://www.wakegov.com/humanservices/data/Documents/WC_Drug_Overdose_Prevention_Tobacco_Initiative_Final.pdf).

LARRY'S STORY OF RECOVERY

Rusty was introduced to Larry–a 47 year-old white man—in December 2018, through a referral from the NC Harm Reduction Coalition (NCHRC). At the time of the introduction, Larry was a veteran, living in a stairwell near downtown Raleigh. Though the odds were stacked against him, Larry still managed to keep a job and performed well as a back-of-house employee at a local restaurant. Prior to Rusty's intervention, the NCHRC outreach worker exhibited incredible care and compassion with Larry, allowing Rusty to be seen as a trusted confidant so that a relationship could be more easily built. After Larry and Rusty were introduced, Larry was referred to a local psychiatric hospital for a brief period, to address mental health issues and obtain proper medication. Though he had informed his employer of his reason for being away from work, upon his hospital release he was let go from his job. Shortly thereafter, Larry overdosed on heroin and was revived by Wake EMS. Working diligently with him over time, Rusty was able to get him into Healing Transitions and eventually into WakeBrook for a medical detox.

While in Wakebrook, Larry contacted the Veterans Administration and was given a voucher for apartment housing. Moving into his own room was a giant step for Larry, who had been street-bound a few months prior. Working to strengthen his recovery capital and social network, Rusty introduced him to members in the AA community as well as a local church–all of which aided him on his hopeful road to success. Rusty took him to Catholic Parish Outreach to obtain food, and then to get his haircut for a job interview. Larry successful secured employment at another Raleigh restaurant as a line cook. The NCHRC outreach worker and Rusty went so far as to provide pots, pans, and utensils to Larry, so he had something to cook with in his new place.

Things were going well for a time, but Larry had a setback. Attempting to help some old friends out of a desperate situation, Larry ended up using drugs again and was arrested. Undeterred, however, Rusty and the NCHRC outreach worker continued to visit him in jail; they also wrote letters and contacted attorneys on Larry's behalf. Recently released, Larry is back engaged with Rusty, and they are working to find him employment and take care of his mental health and substance use recovery. Larry also volunteers with NCHRC, assembling lifesaving Narcan kits. The outreach work of NCHRC has been incredible. This example exudes the effectiveness of community helpers working together to change an individual's life for the better.

NOTABLE NUMBERS

The Opioid Problem

Wake County ED Overdose Visits[2]

144 -18.6% 177

Jan-Jun 2019 ↓ Jan-Jun 2018

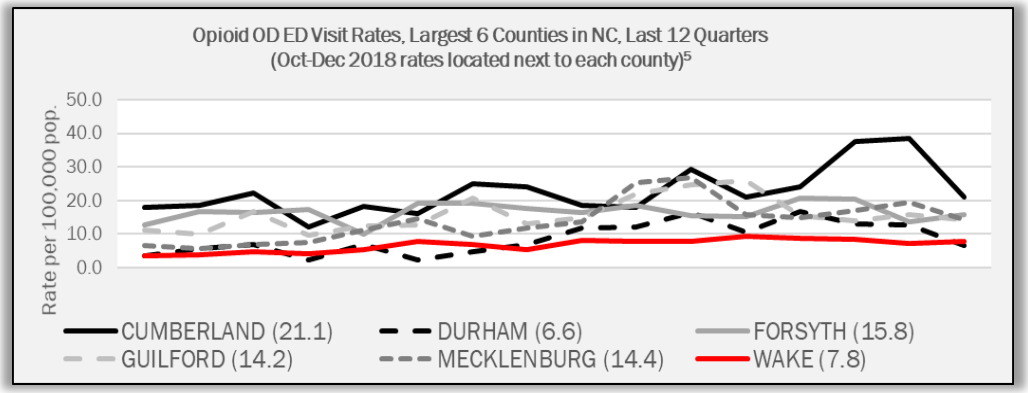
Percent Change ED Overdose Visits[2]

-18.6% (Wake County, Jan-Jun 2019) -5.5% (North Carolina, Jan-Jun 2019)

Estimated Savings for Reduced Hospital Visits (Inpatient and ED)[3]

$467,604

Jan-Jun 2019



Average Cost ED[3]

$22,636

Average Cost Inpatient[3]

$50,182

Self-Pay Percentage[4]

47.0%

Oct 2017 -Sept 2018

The Coalition Project

Advanced Practice Paramedic Encounters for Substance Use

1,072

Jan 2018-Jun 2019

EMS Opioid Overdoses Receiving Narcan

670

Jan 2018-Jun 2019

Incoming Clients (new to program)

495

Jan 2018-Jun 2019

Referral Rate for All Clients

47%

Jan 2018-Jun 2019

Show Rate for All Clients

79%

Jan 2018-Jun 2019

EMS Narcan Administration with CPSS Follow up

76% Jan-Jun 2019 54% Jan-Dec 2018 (Benchmark)

Client CPSS Contacts

3,866

Jan 2018-Jun 2019

Client IDPCN (Nurse) Contacts

895

Jan 2018-Jun 2019

Registered Callers to Quitline

1,122

Jan 2018-Jun 2019

Estimated Revenue Generated for Referrals to Partners[6]

$371,508

Jan 2018 -Jun 2019

PROGRAM HIGHLIGHT

In March 2019, the Initiative released the *Overdose Pocket Guide* (Figure 1). Measuring 2.5" x 4.5" and containing ten (10) fold-up panels, the pocket guide can be used by anyone in the community—first responders, crisis volunteers, individuals who overdose, family or friends—as a resource to get help.

Two of the Initiative's key recommendations for improvement in the 2018 annual report were *to provide additional support for staff, family and friends of clients,* and *the community,* and *to increase awareness of available resources for treatment and other services to clients.* The pocket guide accomplishes both.

An individual can more effectively respond to someone who has overdosed by reading the information in the pocket guide on the NC Good Samaritan Law, signs/symptoms of an opioid overdose, and the opioid reversal drug, Narcan (naloxone). The names and numbers of organizations that provide detox/crisis services are provided, to get someone into treatment immediately. Additional information on services and resources such as behavioral health, longer-term substance use disorder treatment, HIV/STD testing, syringe exchange and housing is contained in the pocket guide.

Family members and friends can also find information in the guide on support groups and community-based services, treatment and education. The pocket guide is provided primarily as a "starting place" for individuals who need help; it is not meant to be an exhaustive list of resources, and does not promote one service over others.

Figure 1

PROGRESS TOWARD GOALS AND OBJECTIVES

As discussed in the Executive Summary, all of the objectives (12 out of 12) comprising Goal #1 of the Initiative (**creating a coordinated infrastructure for access to prevention, treatment and recovery support services for drug overdoses and tobacco use**) were met in CY 2018; Goal #1 has thus been retired.

Table 1 below shows that as of 6/30/19, three of the objectives related to Goal #2 of the Initiative, **increasing availability for peer support recovery focused training,** remained in progress.

TABLE 1 GOAL 2: INCREASE AVAILABILITY FOR PEER SUPPORT RECOVERY-FOCUSED TRAINING			
	OBJECTIVE	**STATUS AS OF 6/30/19**	**ADDITIONAL COMMENTS**
2.1	By end of 2018, complete and have credentialed a Peer Support Recovery Focused Curriculum.		Objective not fully met by end of 2018; curriculum has been developed and submitted to UNC but approval still pending.
2.2	By end of 2018, identify, train, and register at least 4 individuals to provide Certified Peer Support Specialist (CPSS) training.		Successfully completed April 2018.
2.3	By end of 2019, train 24 individuals using a recovery focused curriculum.		Objective not fully met by end of 2018; training delayed due to curriculum having been developed and submitted to UNC but approval still pending.
2.4	By end of 2020, train a minimum of 20 youth as youth ambassadors to provide community education on substance use and tobacco prevention.		Objective not started—from June-September 2019, preparation meetings with at least five organizations will take place.

The data for the Initiative's client-focused goals (#3 **Expanding Access to Treatment and Recovery,** #4 **Preventing Substance and Tobacco Use** and #5 **Making Naloxone More Widely Available**) changed effective Q2 CY 2019, and presented in Appendix 1A of this report.

As the Initiative has evolved, its goals and objectives have changed as well. Table 2 lays out four new goals for Year 3 of the Initiative:

TABLE 2 GOAL 6: DEVELOP DATA SHARING AGREEMENTS FOR CARE COORDINATION AND OUTCOME EVALUATION			
	OBJECTIVE	**STATUS AS OF 6/30/20**	**ADDITIONAL COMMENTS**
6.1	Identify partners for data sharing agreements.	-	In process.
GOAL 7: DEVELOP AND REPORT KEY PERFORMANCE INDICATORS			
	OBJECTIVE	**STATUS AS OF 6/30/20**	**ADDITIONAL COMMENTS**
7.1	Identify and put in place data collection for key performance indicators.	-	In process.
GOAL 8: ESTABLISH CARE STRATIFICATION CLASSIFICATION SYSTEM AND PROCESS			
	OBJECTIVE	**STATUS AS OF 6/30/20**	**ADDITIONAL COMMENTS**
	No current objectives at this time.	-	
GOAL 9: DEVELOP SUTAINABILTY PLAN			
	OBJECTIVE	**STATUS AS OF 6/30/20**	**ADDITIONAL COMMENTS**
9.1	Develop centralized programmatic home and continued permanent funding.		In process of developing an expansion request.

EVALUATION FRAMEWORK FOR MEASURING LONGER-TERM CLIENT OUTCOMES

The program evaluation goals for the first year of the Initiative were short-term in nature, focused on establishing program components (staff and activities), defining the target population and building community connections for those clients served by the Rapid Response Team (RRT). As the Initiative progresses, the medium-term goals will shift toward evaluating the successes/failures of the program, bearing in mind that the client population being served will likely continue to grow.

In years 2 and 3 of the Initiative, the data evaluation team has and will continue to build tools to identify those clients engaged by Certified Peer Support Specialists (CPSS) who are at highest risk for repeat overdoses and actively work to meet their treatment needs. These tools underscore the need to continue collecting client-level data which includes, but is not limited to, social determinants of health (i.e. employment status, housing, transportation, and medication-assisted treatment).

MEGAN'S STORY OF RECOVERY

Megan, a 25-year-old, struggled with heroin and other substances for seven years which resulted in her serving time in prison. In early 2019, she overdosed in a McDonald's bathroom and was dragged out by her drug dealer because she embarrassed him. While Megan was actively using drugs, she was sexually assaulted and beaten.

Megan's life was a vicious cycle. She would go to a hotel room, get dressed, put her face on and sell her body to support her habit. Megan's biggest fear was that she would die alone, in a hotel room, and her mother would get a phone call that she didn't make it as a result of her addiction.

She had a connection with Healing Transitions which is where she met her Certified Peer Support Specialist. Megan stated she knew if she was willing to show up, the CPSS would be available to her. The CPSS assisted Megan with an appointment to the Morse Clinic for medication assisted treatment (MAT). Prior to the appointment, Megan was again in a hotel room where she would overdose once more. After waking up on a Friday morning, she called her CPSS and said "I'm tired. I know I'm going to die in this hotel room if I don't do something different and get out of here." A few minutes later, her CPSS picked her up and took her to the scheduled appointment at the Morse Clinic. That night, Megan stayed at Healing Transitions and the following day, she went to reside in an Oxford House.

Megan continues to receive medication and treatment through Morse Clinic and she has a stable job. Megan states "no one wakes up one day and decides to be a heroin addict. No one wakes up one day and decides, I want to sell my body, steal, cheat and lie, but it just happens." Since Megan has been drug free, she facilitates a medication assisted treatment (MAT) recovery support group for men and women who receive MAT. Megan has grown in her recovery and states she tries to put just as much effort into her recovery as she did chasing her habit, which was a lot of effort." She has a relationship with her family and with a recovery support group. Megan stated "my worst day since that Friday morning, is better than every day of the seven years I used, and I'm grateful for that today. It was the beginning of THE END of a life full of hell for me." Megan attributes the start of her recovery to the Wake County Rapid Responder Program which saved her life.

APPENDIX 1A

CLIENT-FOCUSED GOALS:
(3) EXPAND ACCESS TO TREATMENT AND RECOVERY
(4) PREVENT SUBSTANCE USE/TOBACCO USE
(5) MAKE NALOXONE MORE WIDELY AVAILABLE

METRIC		CY2018	CY2019				YEAR-TO-DATE	PROGRAM-TO-DATE (1/1/18-6/30/19)
			Q1	Q2	Q3	Q4		
EMS Metrics								
3.1a	**Advance Practice Paramedic (APP) Encounters for Substance Use**	717	169	186			355	**1,072**
3.1b	**Opiate Overdose (OD) Receiving Narcan**	436	115	119			234	**670**
3.1c	Opiate OD No Narcan	126	37	35			72	198
3.1d	Narcan Administrations by EMS with APP/Healing Transitions Follow-Up	235	87	90			177	412
3.1e	Opiate OD with Narcan but No EMS Transport	218	56	55			111	329
3.1f	**% Narcan Reversals with Follow Up by Healing Transitions**	54%	76%	76%			**76%**	61%
Healing Transitions Client Population (Engaged by CPSS)								
3.2a	**Incoming Clients (New to program)**	317	90	88			178	**495**
3.2b	Deceased	0	0	0			6	6
3.2c	Discharged / Transitioned	0	0	0			0	0
3.2d	Total Population Engaged by Healing Transitions Peer Support	317	407	495			489	489
Peer Support (Client Follow-Up) Engagement Statistics (multiple contacts per client)								
3.3a1[7]	Clients Engaged	213	118	130			197	318
3.3a2[7]	Client Engagements Attempted	311	262	378			452	493
3.3a3	Client Engagement Success Rate	68%	45%	34%			44%	65%
3.3b	Total Population Engagement Rate	67%	29%	26%			40%	65%
3.3c1	**Total Contacts between CPSS and Clients**	2617	587	662			1249	**3866**
3.3c2	Healing Transitions Peer Support Workers FTEs	3	1.5	1.5			1.5	2
3.3c3	Avg Contact per FTE	872	391	441			833	1933
Inbound Referrals								
3.4a	Wake EMS	257	81	85			166	423
3.4b	Referred by Other Sources	60	9	3			12	72

Referrals to Treatment and Recovery Oriented Services								
3.5a	Total Clients Referred	141	39	51			90	231
3.5b	Total Clients Attending Appointments	127	28	28			56	183
Referral Rates and Show Rates Treatment and Recovery Oriented Services								
3.5a1	**Referral Rate All Clients**	44%	10%	10%			18%	**47%**
3.5b1	**Show Rate All Clients**	90%	72%	55%			62%	**79%**
3.5a2	Total Referrals to Treatment, Support and HARM Services (Clients Can Have More Than One Referral)	282	71	80			151	433
3..5b2	Total Appointments Attended (Clients Can Have More Than One Appointment)	235	47	35			82	317
3.5c	Show Rate All Referrals	83%	66%	44%			54%	73%
WCHS Injury and Drug Prevention Community Nurse (IDPCN) Metrics								
3.6a	**Total Clients Contacted in Field-Based Settings**	260	282	353			635	**895**
3.6b	Total Clients Attending Group Educational Sessions	257	149	118			267	524
3.6c	Total Group Educational Sessions	8	3	3			6	14
3.6d	Total One-on-One Educational Sessions	20	17	70			87	107
3.7	Referred for Needle Exchange Services	9	3	1			4	13
3.8	Received Wound Care	8	6	3			9	17
3.9	Received Hepatitis A/B Immunizations	139	115	97			212	351
3.10	Referred for STD Testing/Follow-Up	11	1	1			2	13
3.11	Screened for Pregnancy	4	1	1			2	6
3.12a	Positive for Pregnancy	4	0	0			0	4
3.12b	Referred to Pregnancy Care and Other Services	18	5	1			6	24
3.13	Referred to Food Resources	2	32	0			32	34
3.14	Referred to Primary Care (Medical, Dental, Vision)	36	8	18			26	62
Tobacco Use Prevention Metrics								
4.1	**Number of Registered Callers to Quitline**	809	109	204			313	**1122**
4.2	Number of Callers using e-cigarettes	77	33	20			53	130
4.3	Callers Served by Public/Private Partnership	0	61	75			136	136
Naloxone Distribution Metrics								
5.1	Naloxone Kits Distributed by WCHS	75	12	11			23	98
5.2	Naloxone Kits Distributed by EMS	302	48	36			84	386
5.3	Total Kits Distributed	377	60	47			107	484

APPENDIX 1B

Social Determinants of Health of Program Population		
METRIC	NUMBER OF CLIENTS	PROGRAM-TO-DATE (1/1/18-6/30/19)
% of total clients referred to formal SUD	489	23%
% of clients referred to support and NC HARM Reduction Coalition	489	9%
% of Referred Clients linked to Recovery Housing	489	34%
% Clients who desire MAT	218	53%
% Clients who are homeless	416	26%
% Clients who had no transportation	416	35%
% of individuals with documented comorbid medical problems	416	8%

APPENDIX 2

Client Demographics, Q1 and Q2 CY2019					
		Q1 and Q2 CY 2019 #	Q1 and Q2 CY 2019 %	PROGRAM-TO-DATE #	PROGRAM-TO-DATE %
Gender	Male	114	64%	292	59%
	Female	64	36%	202	41%
	Non-binary	0	0%	1	0%
Race/Ethnicity	White	143	80%	376	76%
	Black/AA	25	14%	50	10%
	Hispanic	4	2%	15	3%
	Other	2	1%	8	2%
	Unknown	4	2%	46	9%
Age	10-19	0	0%	2	0%
	20-29	57	32%	172	35%
	30-39	64	36%	179	36%
	40-49	24	13%	55	11%
	50-59	17	10%	37	7%
	60-69	8	4%	14	3%
	Unknown	8	4%	36	7%

REFERENCES

1. "Program-to-Date" in this report includes the 6 quarters from 1/1/18-6/30/19.

2. Source for data: https://injuryfreenc.shinyapps.io/OpioidActionPlan/, 7/8/19.

3. Cost and cost savings determined using data found at NC DHHS, Transparency in Health Care Costs, https://www2.ncdhhs.gov/dhsr/ahc/hb834/compare.asp on 8/5/19 and NC DETECT, 8/5/19.

4. Source for data: NC DETECT, 8/5/19.

The following steps explain the methodology for the cost savings calculation:

a. *Transparency in Health Care Cost* data for Wake County from 10/1/17 to 9/30/18 listed the average gross charges for Diagnostic Related Groups (DRG) 917 (poisoning and toxic effects of drugs **with** major complications and comorbidities) and 918 (poisoning and toxic effects of drugs **without** major complications and comorbidities) at four Wake County hospitals: Duke Raleigh, Rex, WakeMed Cary, and WakeMed Raleigh.
b. NC DETECT data for Wake County from 10/1/17 to 9/30/18 showed 287 opioid overdose visits to these same four hospitals.
c. A weighted average cost for both inpatient and treat and release (T/R) visits was calculated. Inpatient dispositions include admitted, admitted-psych and transferred **[**$4,114,898 ÷ 82 visits **= $50,182 per visit];** T/R dispositions include discharged and left without advice **[**$4,640,302 ÷ 205 visits = **$22,636 per visit]**.
d. The percentages for inpatient **[**82 ÷ 287 = **28.6%]** and T/R [205 ÷ 287 = **71.4%]** visits were calculated.
e. The same percentage breakdowns (28.6% inpatient; 71.4% T/R) were applied to the 33 fewer visits **[**177-144 = **33]** reported in Q1 and Q2 for CY19. **[**33 x 0.286 = 9.4, rounded to **9 inpatient visits;** 33 x 0.286 = 23.6, rounded to **24 T/R visits]**
f. The weighted average costs were multiplied by the number of each type of visit. **[**$50,182 x 9 inpatient visits = **$451,638**; $22,636 x 24 T/R visits = **$543,264**]
g. The costs for both types of visits in step 6 were totaled. **[$451,638 + $543,264 = $994,902]**
h. **135/287 (47%)** of the opioid overdose ED visits were classified as "self-pay" in the insurance category of the NC DETECT data. The figure in step 7 was therefore multiplied by the percentage of self-pay visits—the final figure represents the estimated healthcare system's savings for the reduced visits. **[$994,902 x 0.47 = $467,604]**

5. Source for data: NC Opioid Action Plan Dashboard, at https://injuryfreenc.shinyapps.io/OpioidActionPlan/, 6/26/19.

6. Source for data: Alliance Health, 7/27/19.

The following steps explain the methodology for the revenue calculation:

- To estimate the revenue generated by Rapid Response Team (RRT) referrals to treatment providers, two separate datasets were analyzed in conjunction:
    - Clients with documented referrals in the RRT 5CRM database between January 2018-June 2019
    - Aggregate cost and client data obtained from Alliance Health for the period 1/1-3/31/19 (FY19Q3)
- The FY19Q3 *average payment per client month* was calculated for Alliance's non-Medicaid clients (since the vast majority of RRT clients are non-Medicaid) in three treatment categories: opioid maintenance therapy (**MAT**), substance abuse intensive outpatient program (**SAIOP**), and detox & facility-based crisis (**DETOX**).
- The average payment per client month is equal to the amount paid divided by the number of clients served over the 18-month period.
- Table A below shows the actual calculations for the revenue generated (**TOTAL CLIENT MONTHS PAID X AVG PAYMENT PER CLIENT MONTH = REVENUE**), with the following key assumptions made:
    - RRT clients receive MAT indefinitely; referrals "carry over" from previous months, and are added to the "new" referrals in each new month, to determine total client months
    - SAIOP clients receive a maximum of 3 months, referrals from previous months carry over for 3 months, and then are added to new referrals in a new month, to determine total client months paid
    - Detox clients receive this type of treatment only once, and thus are counted in one month only

- Payments were not pro-rated for partial months (ie, if client referred on 1/31, she was counted for January)

TABLE A: ESTIMATED REVENUE GENERATED BY RRT TO SUD TREATMENT PROVIDERS						
MONTHS	SERVICE TYPE	NEW ADMISSIONS	DISCHARGED	TOTAL CLIENT MONTHS PAID	AVG PAYMENT PER CLIENT MONTH	REVENUE
4/1/18-6/30/19	DETOX	27	27	27	$1,540.88	$41,603.76
1/1/18-6/30/19	MAT	49	0	512	$354.93	$181,726.49
1/1/18-6/30/19	SAIOP	56	54	166	$892.64	$148,178.24
					REVENUE GRAND TOTAL	$371,508.49

7. The sum of clients does not increase over time, as records overlap.