

PROSPECTIVE STUDY OF THE FEDERAL BUREAU OF PRISONS' 2004 TOBACCO BAN

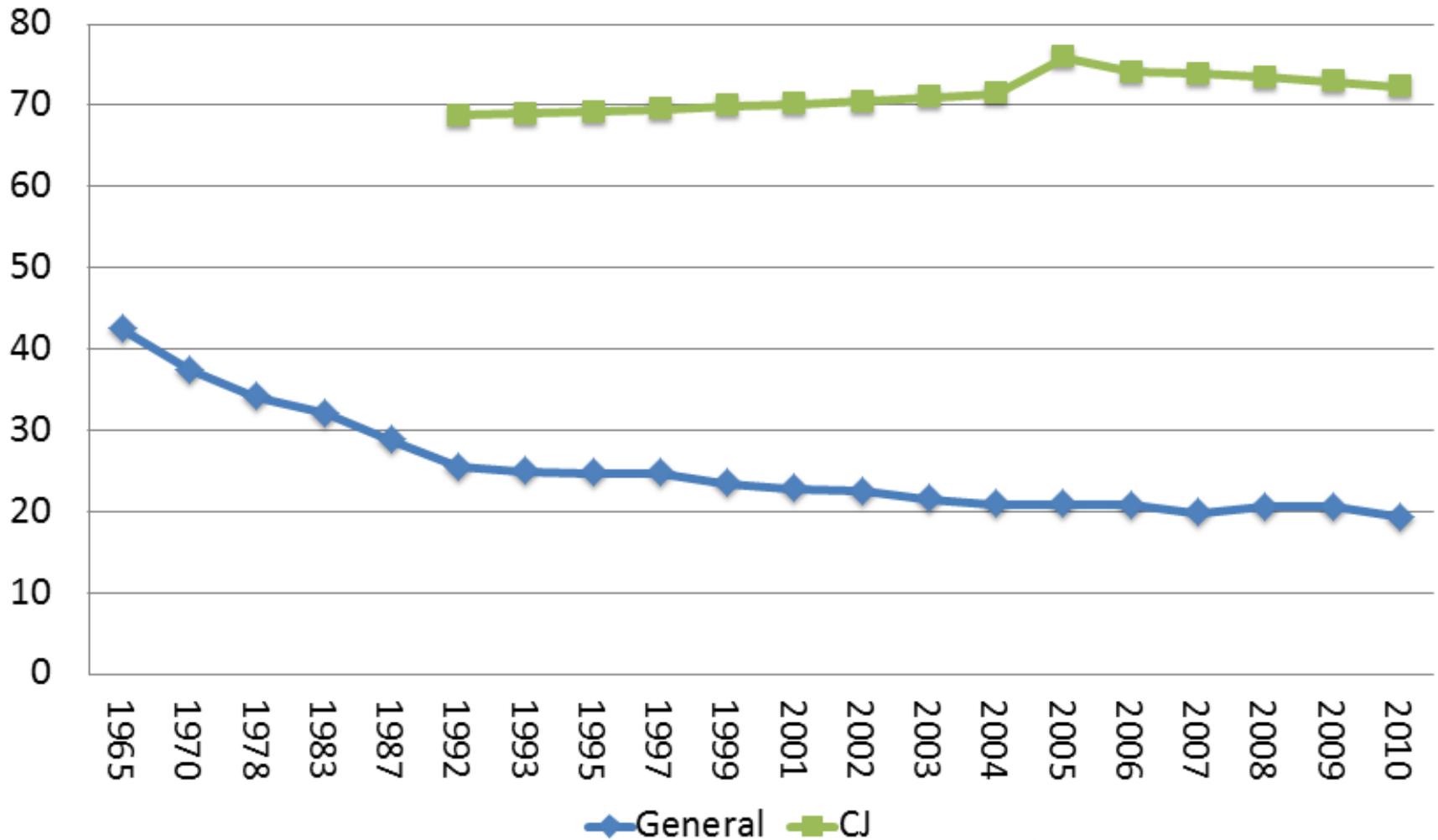


Why the Bureau of Prisons?

Per Program Statement 1640.04 (March, 2004) all Wardens were assigned the task of reducing the amount of second hand smoke in the Bureau of Prisons. In response to that, FMC Devens added a local institution supplement (DEV1640.03) which stated the following:

“To reduce the risk to non-smoking staff and inmates, the Warden has designated that FMC Devens (to include the Federal Prison Camp) is a non-smoking institution effective December 01, 2004.”

Prevalence of Smoking



**One out of two lifelong
adult smokers will die
from a smoking related
disease.**

CDC. Projected smoking-related deaths among youth – United States. MMWR 1996;45(44):971-974

Last updated February 2011

©  treatobacco.net

Hughes JR. A quantitative estimate of the clinical significance of treating tobacco dependence. *American journal of preventive medicine*. 2010;39(3):285-6.

Tobacco Ban Study

Principal Investigator:

Stephen Martin, M.D. ; University of Massachusetts Medical School

Co-Investigators:

Sandra Howard, M.D. ; Federal Bureau of Prisons

Joseph DiFranza, M.D. ; University of Massachusetts Medical School

Robert Goldberg, Ph.D. ; University of Massachusetts Medical School

Stephen Krinzman, M.D.; University of Massachusetts Medical School

Sponsors:

Federal Bureau of Prisons

University of Massachusetts Medical School

FMC Devens began study in February 2011

FMC Carswell was added in April 2012 to gather data regarding females who stopped smoking as a result of the tobacco ban



FMC Devens Staff

- ▣ Elaine Krauss, R.N., QR Specialist – Coordinates appointments and logistics for FMC Devens
- ▣ Karen Schilling, R.N., ADON – Enrollment for FMC Devens and coordinates the program at FMC Carswell
- ▣ Matt Taylor, Chief of Physical Therapy – 6MWT, Hand Grip
- ▣ Louise Sapienza, Respiratory Therapist – Pulmonary Function Tests
- ▣ Kevin Farley, Lab Supervisor & Fern Stacy, Phlebotomist - Draw all labs and ship blood
- ▣ MLP's and M.D.'s – Clinical visits

FMC Carswell Staff

- ▣ Karen Schilling, R.N., ADON – Coordinator
- ▣ Shana Grimes, Medical Support Assistant – Enrollment
- ▣ Jahanara Jones, R.N. - Schedules appointments
- ▣ Adriane Backus, Respiratory Therapist – Pulmonary Function Tests, 6MWT, Hand Grip and Questionnaires
- ▣ Suzanne Hilton, Lab – Draws, freezes, and ships blood samples
- ▣ Sergio Mercado, M.D. – Clinical visits

Study Procedures

- ▣ Enroll subjects
- ▣ Initial Visit
- ▣ 30 Day Visit
- ▣ 90 Day Visit
- ▣ 180 Day Visit
- ▣ 1 Year Visit

Enrollment

- ▣ Subjects are screened upon arrival
 - Have they been in the system < 2 years
 - Is their sentence > 2 years
 - Do they speak English
 - Do they have at least a 10 pack-year tobacco history
 - Have they smoked in the last 24 months

If the answer is yes, the inmate is asked if he/she is willing to participate in the study. If he/she agrees, consent forms are signed and an initial questionnaire is completed.

Clinical Visits

1. Questionnaire
2. Six-Minute Walk Test
3. Handgrip Strength
4. Pulmonary Function Tests
5. Blood Testing
(a sample of blood is frozen and stored for up to 10 years)
6. Visit with an MLP or M.D.

Current Subjects

- ▣ FMC Devens
 - 62 Total
 - 26 Active
 - 24 Released/Transferred
 - 10 Withdrew
 - 02 Other

- ▣ FMC Carswell
 - 34 Total
 - 13 Active
 - 11 Released
 - 10 Withdrew

What have we learned? Logistics

- ▣ Implementing and conducting a high-quality study is possible while maintaining institutional priorities of safety and security
- ▣ Teamwork and clear roles and responsibilities are key to success
- ▣ Support from institutional leadership is essential
- ▣ Especially important is a staff member who oversees logistics
- ▣ The study generally dovetails with existing clinical work
- ▣ Participants generally appreciate being part of a study that may benefit others

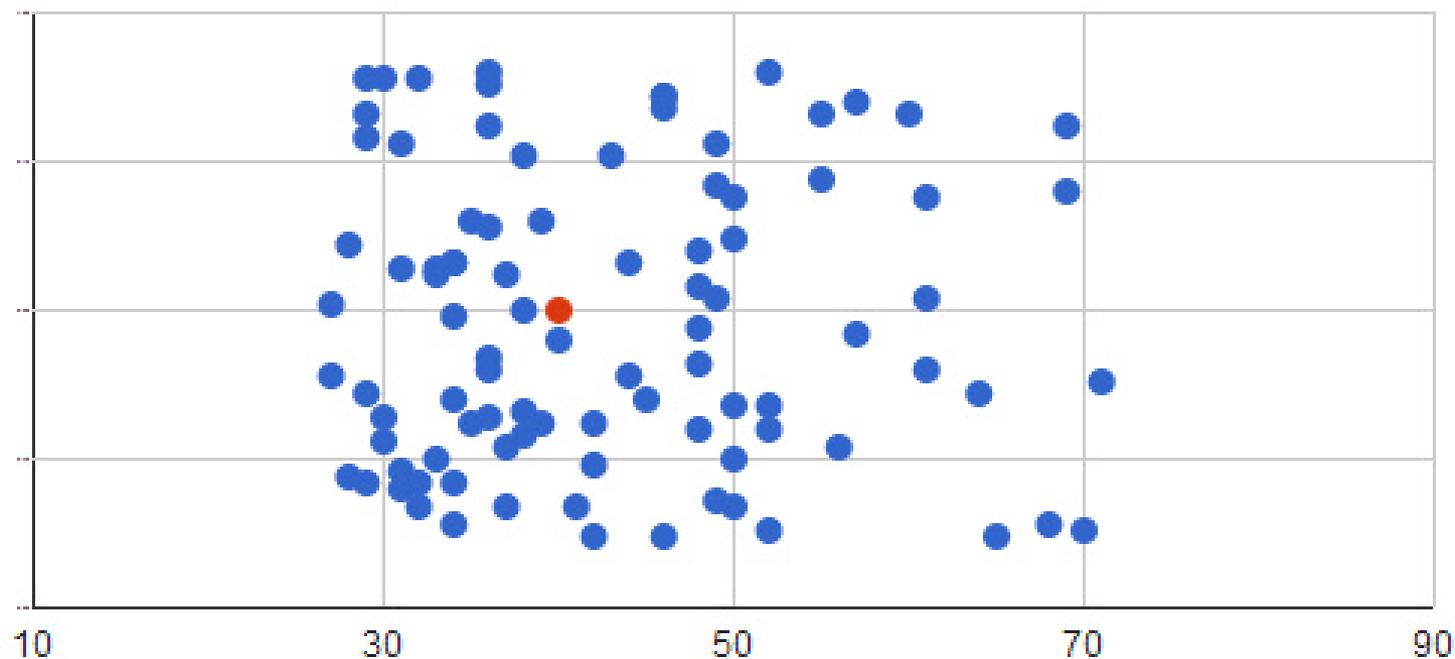
What have we learned? Participants

1. Age at study entry: [Refresh Plot](#)

Total (N)	Missing	Unique	Min	Max	Mean	StDev	Percentile						
							.05	.10	.25	.50 Median	.75	.90	.95
93	3 (3.1%)	35	27.00	71.00	42.91	11.57	28.50	29.50	34.00	40.00	50.00	61.00	68.50

Lowest values: 27, 27, 28, 28, 29

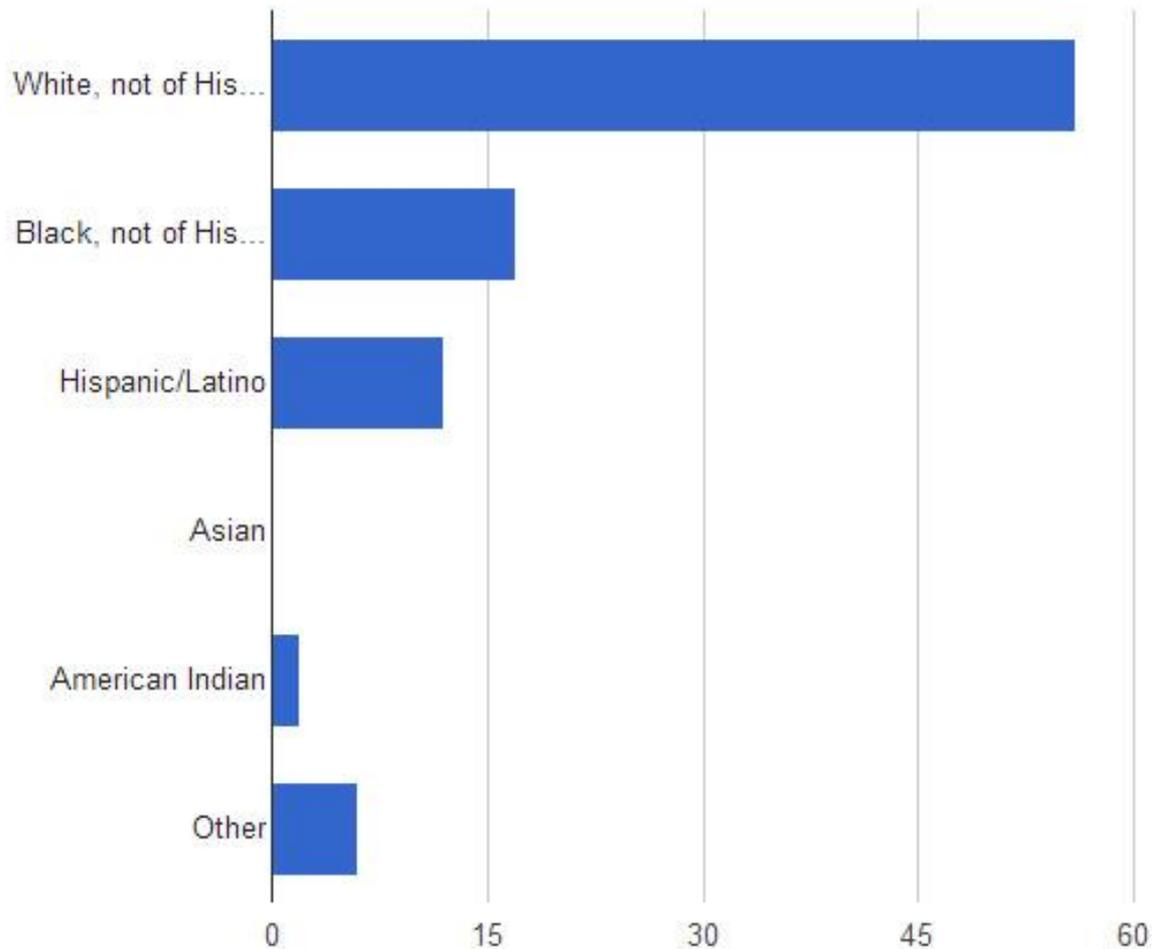
Highest values: 68, 69, 69, 70, 71



3. Ethnic Background: [Refresh Plot](#) View as Bar Chart ▾

Total (N)	Missing	Unique
93	3 (3.1%)	5

Counts/frequency: White, not of Hispanic origin (56, 60.2%), Black, not of Hispanic origin (17, 18.3%), Hispanic/Latino (12, 12.9%), Asian (0, 0%), American Indian (2, 2.2%), Other (6, 6.5%)

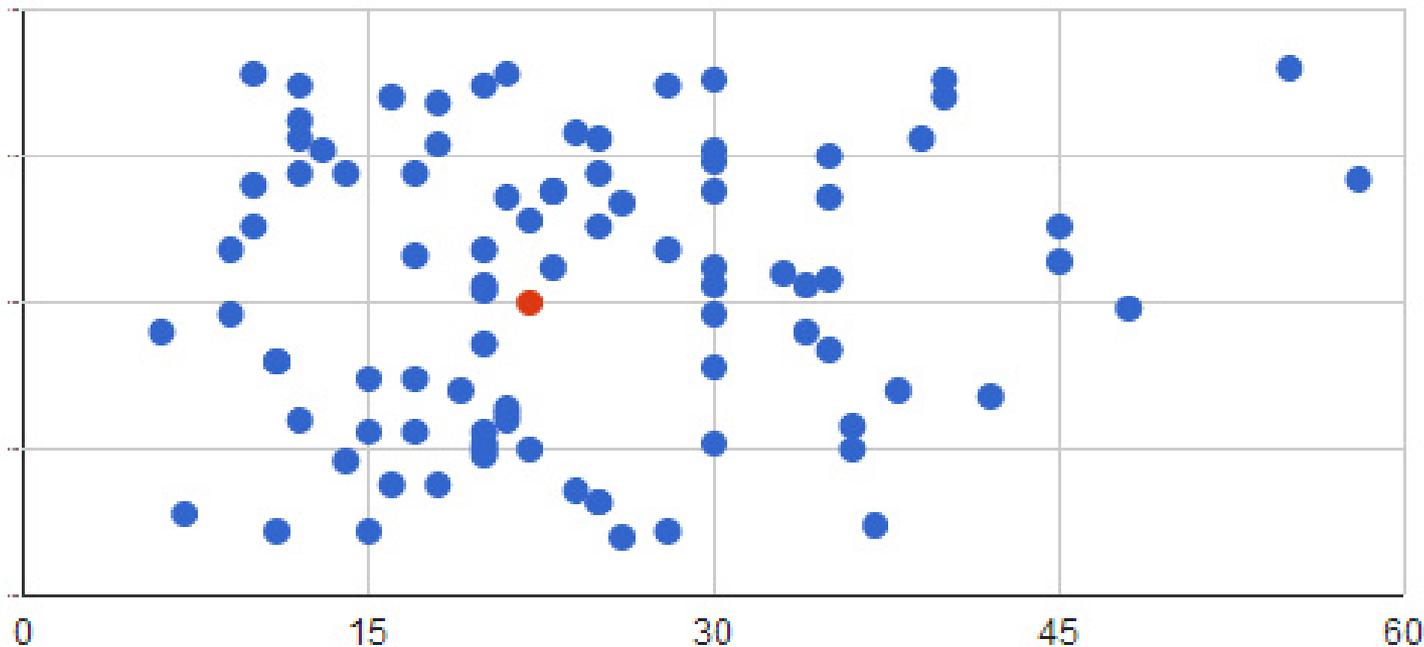


2. How many years have you smoked cigarettes regularly?: [Refresh Plot](#)

Total (N)	Missing	Unique	Min	Max	Mean	StDev	Percentile						
							.05	.10	.25	.50 Median	.75	.90	.95
91	5 (5.2%)	35	6.00	58.00	24.07	10.82	9.50	11.00	16.00	22.00	30.00	38.50	45.00

Lowest values: 6, 7, 9, 9, 10

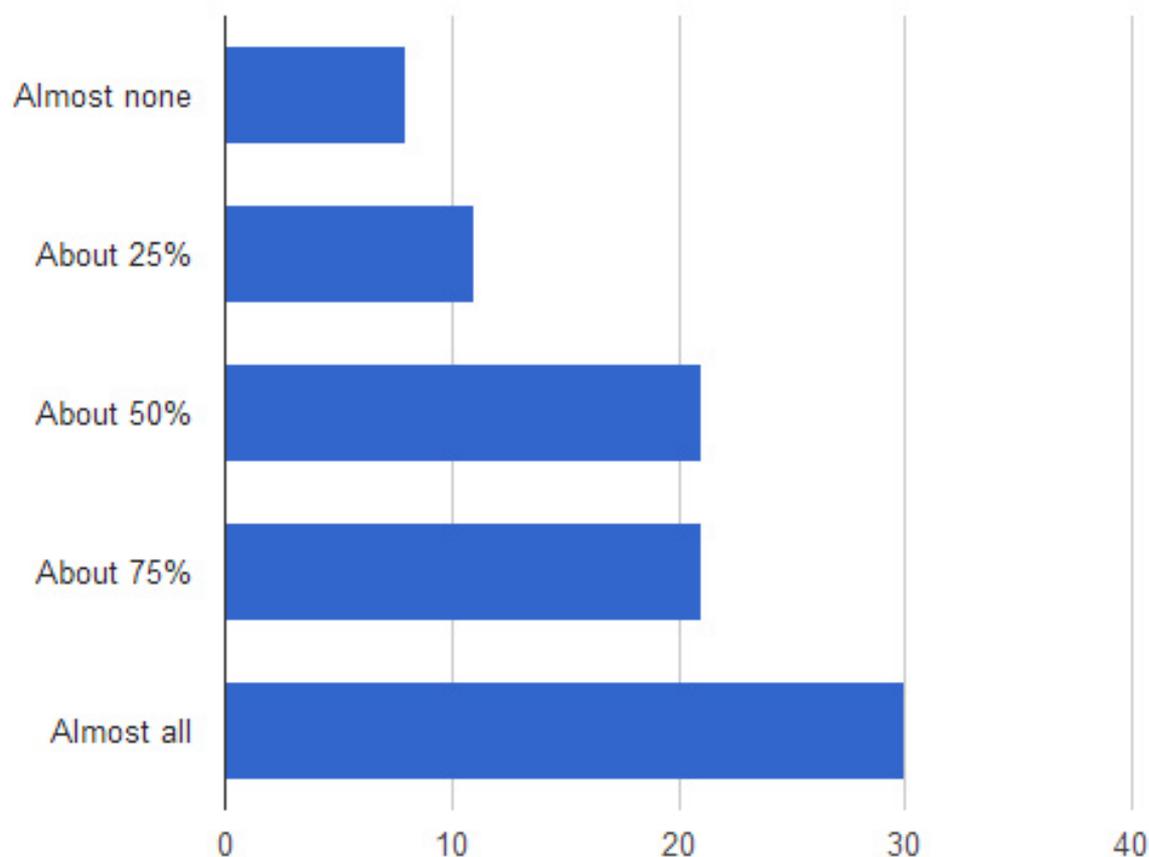
Highest values: 45, 45, 48, 55, 58



4. Before incarceration, among your close friends, what percentage would you say smoked? : [Refresh Plot](#) | [View as Bar Chart](#) ▼

Total (N)	Missing	Unique
91	5 (5.2%)	5

Counts/frequency: Almost none (8, 8.8%), About 25% (11, 12.1%), About 50% (21, 23.1%), About 75% (21, 23.1%), Almost all (30, 33%)

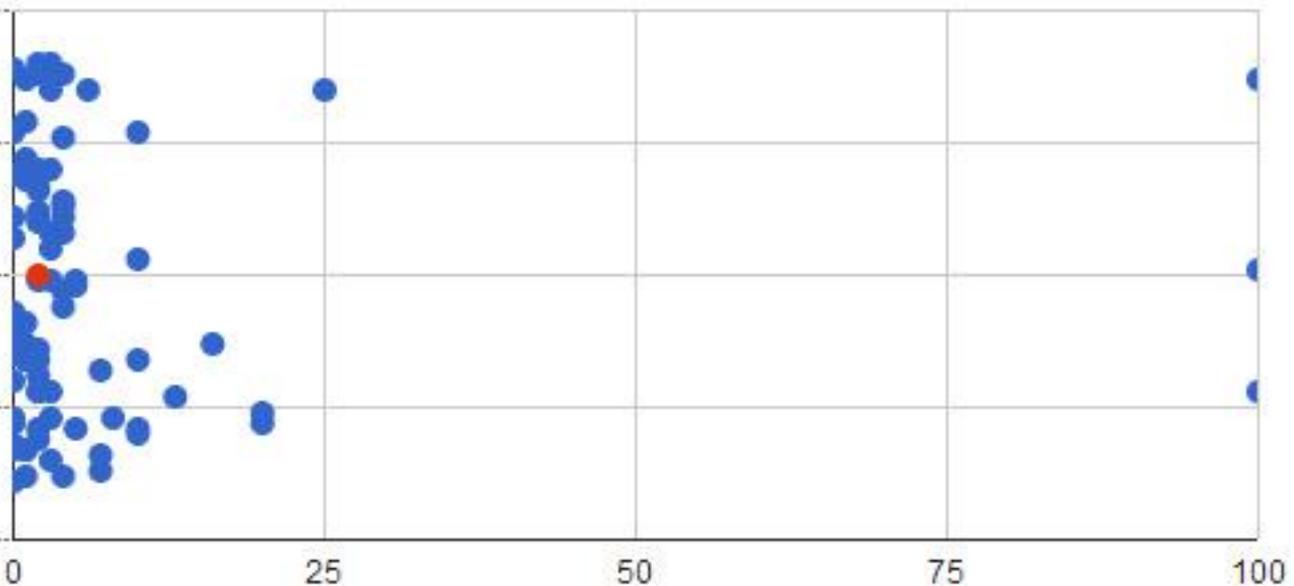


1. How many times in your life have you seriously tried to quit smoking and not smoked for at least 24 hours?: [Refresh Plot](#)

Total (N)	Missing	Unique	Min	Max	Mean	StDev	Percentile						
							.05	.10	.25	.50 Median	.75	.90	.95
86	<u>10 (10.4%)</u>	15	0.00	100.00	7.03	18.38	0.00	0.00	1.00	2.00	4.50	11.50	22.50

Lowest values: 0, 0, 0, 0, 0

Highest values: 20, 25, 100, 100, 100

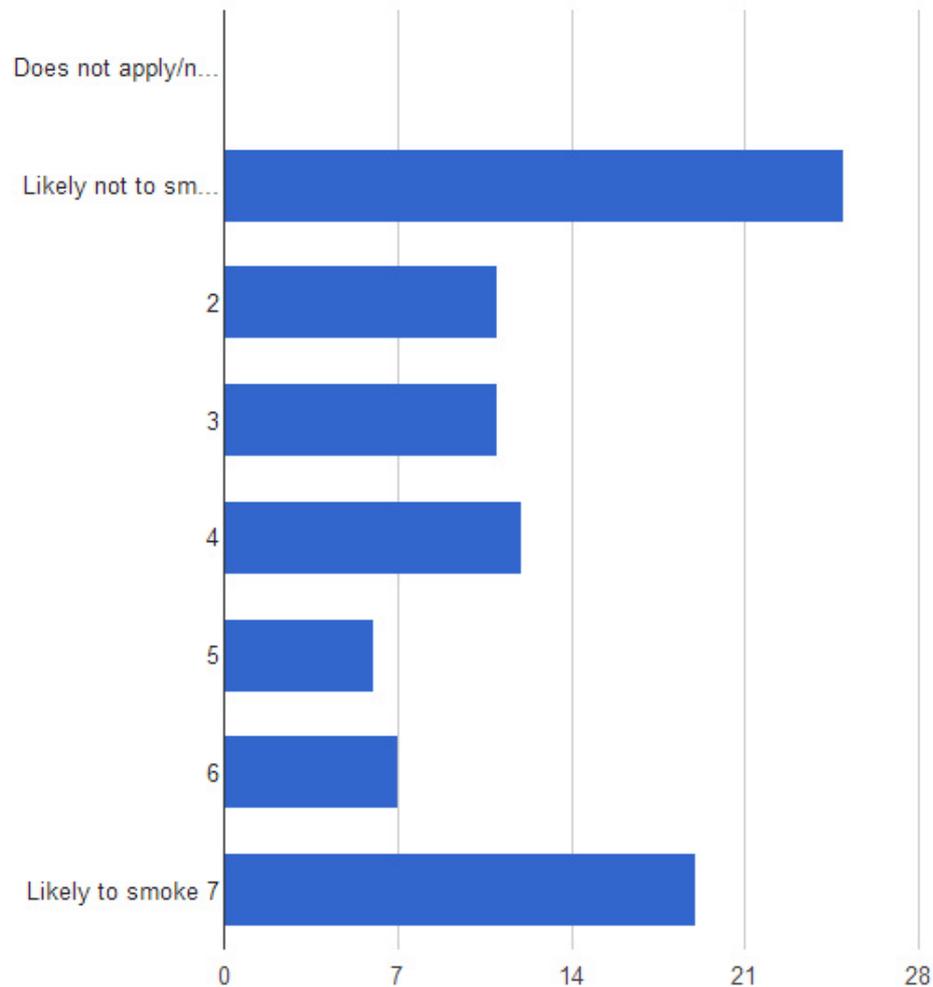


11. How likely are you to smoke once you leave prison? : [Refresh Plot](#)

View as Bar Chart ▾

Total (N)	Missing	Unique
91	5 (5.2%)	7

Counts/frequency: Does not apply/no release (0, 0%), Likely not to smoke 1 (25, 27.5%), 2 (11, 12.1%), 3 (11, 12.1%), 4 (12, 13.2%), 5 (6, 6.6%), 6 (7, 7.7%), Likely to smoke 7 (19, 20.9%)

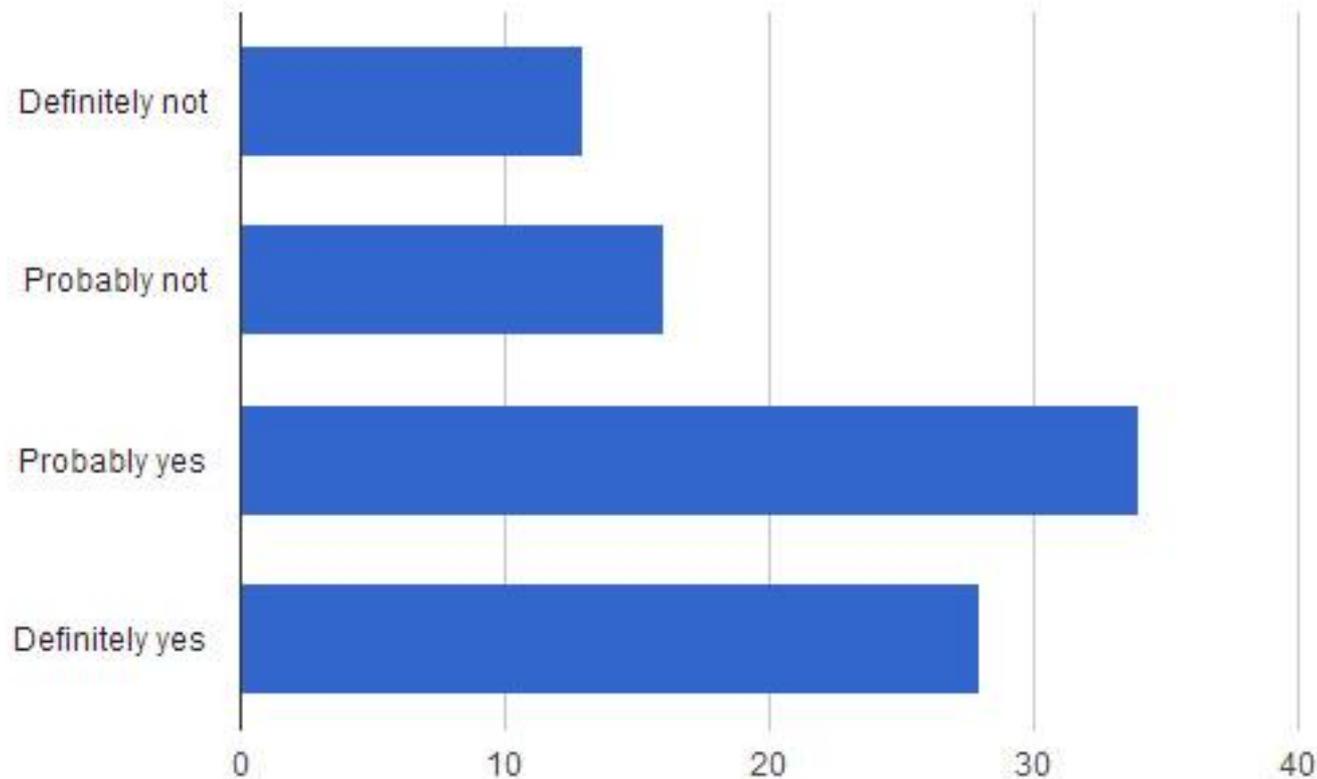


12. If the prison allowed smoking would you continue to smoke? : [Refresh Plot](#)

View as Bar Chart ▾

Total (N)	Missing	Unique
91	5 (5.2%)	4

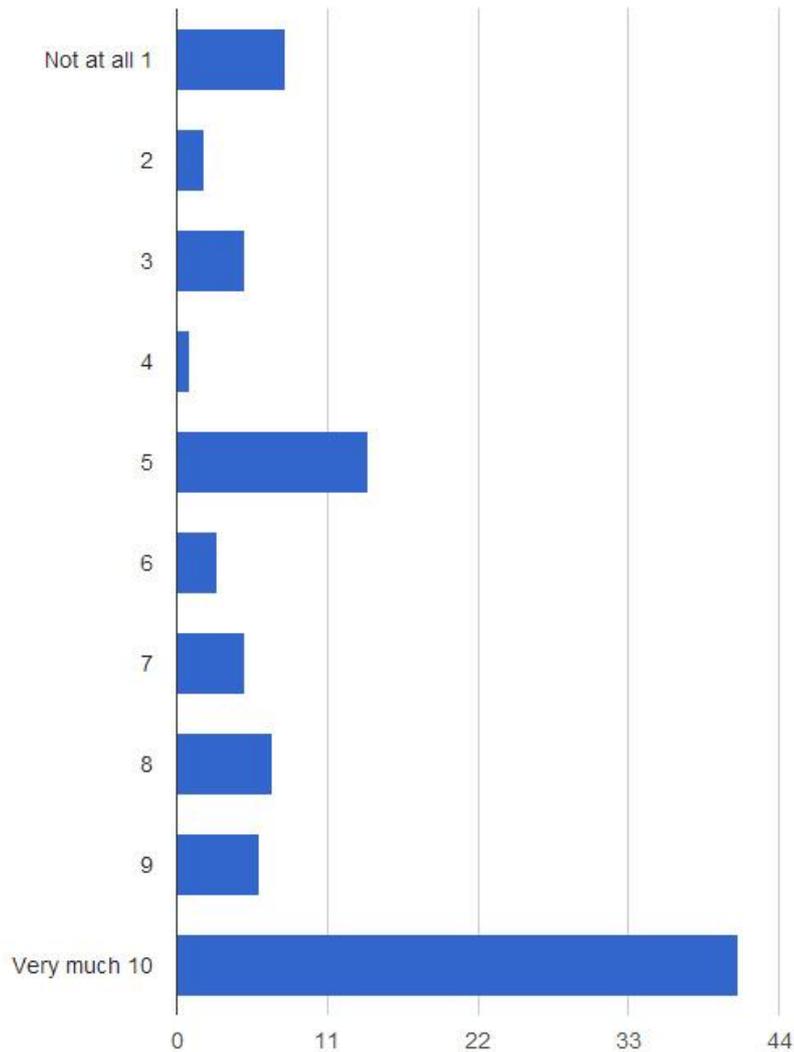
Counts/frequency: Definitely not (13, 14.3%), Probably not (16, 17.6%), Probably yes (34, 37.4%), Definitely yes (28, 30.8%)



6. On a scale of 1 to 10, how important for you is it to stop smoking? Please select a number.: [Refresh Plot](#) [View as Bar Chart](#)

Total (N)	Missing	Unique
92	4 (4.2%)	10

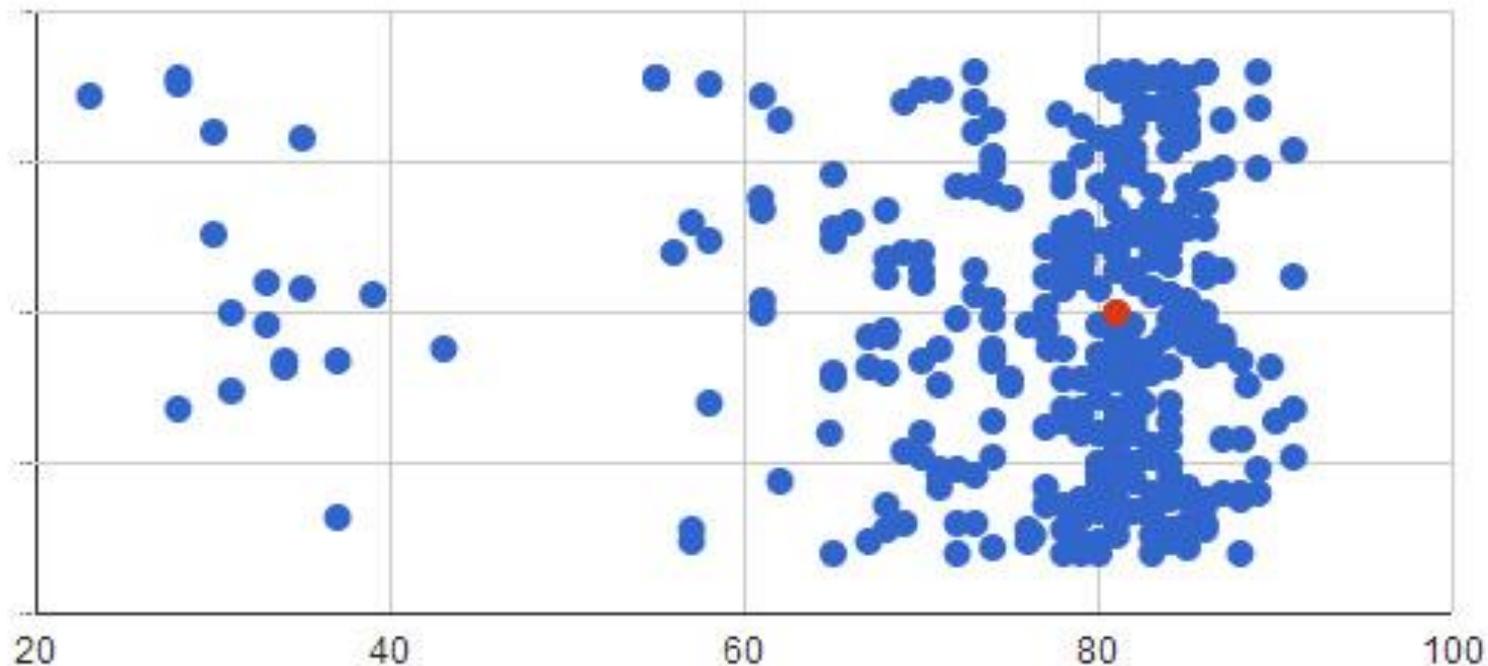
Counts/frequency: Not at all 1 (8, 8.7%), 2 (2, 2.2%), 3 (5, 5.4%), 4 (1, 1.1%), 5 (14, 15.2%), 6 (3, 3.3%), 7 (5, 5.4%), 8 (7, 7.6%), 9 (6, 6.5%), Very much 10 (41, 44.6%)



FEV1/FVC (absolute %): [Refresh Plot](#)

Total (N)	Missing	Unique	Min	Max	Mean	StDev	Percentile						
							.05	.10	.25	.50 Median	.75	.90	.95
351	50 (12.5%)	33	31.00	91.00	76.86	11.36	47.00	65.50	74.50	80.00	83.00	86.00	86.50

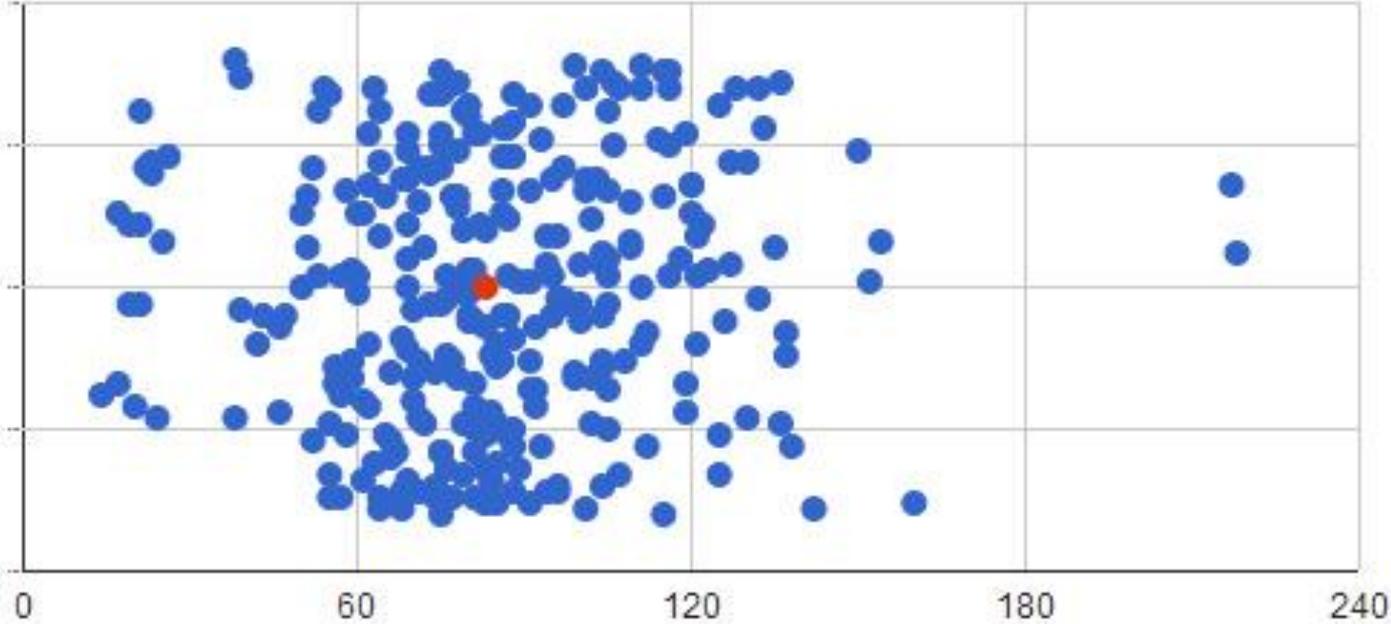
Lowest values: 31, 33, 37, 39, 55



DLCO UNC (% predicted): [Refresh Plot](#)

Total (N)	Missing	Unique	Min	Max	Mean	StDev	Percentile						
							.05	.10	.25	.50 Median	.75	.90	.95
295	<u>106 (26.4%)</u>	54	14.00	152.00	81.58	28.13	24.00	40.00	66.50	82.50	101.00	120.50	130.00

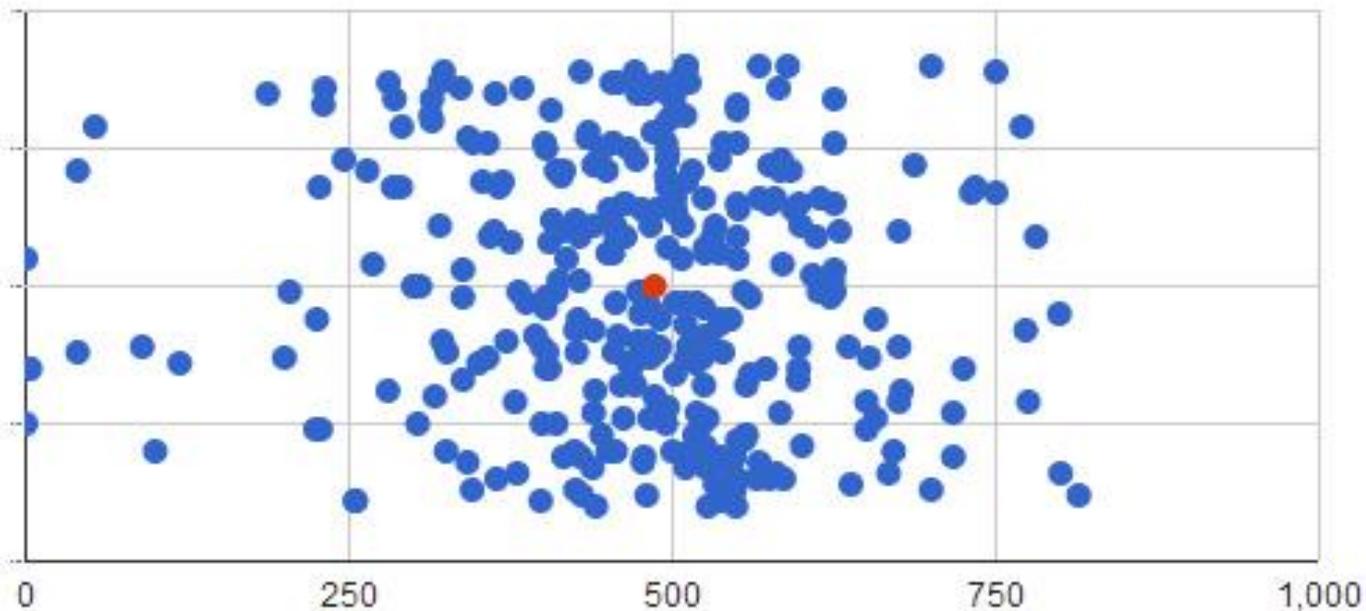
Lowest values: 14, 20, 22, 23, 25



Total Walking Distance (m): [Refresh Plot](#)

Total (N)	Missing	Unique	Min	Max	Mean	StDev	Percentile						
							.05	.10	.25	.50 Median	.75	.90	.95
327	74 (18.5%)	79	0.00	800.00	468.95	147.41	86.32	301.50	410.00	496.20	537.00	597.70	703.50

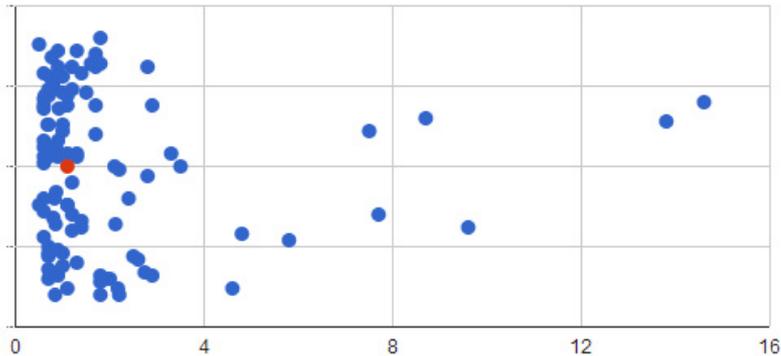
Lowest values: 0, 0, 40.2, 53.64, 119



CRP value (mg/dL): [Refresh Plot](#)

Total (N)	Missing	Unique	Min	Max	Mean	StDev	Percentile						
							.05	.10	.25	.50 Median	.75	.90	.95
104	297 (74.1%)	25	0.50	8.70	1.83	1.89	0.55	0.60	0.70	1.10	1.95	4.05	7.60

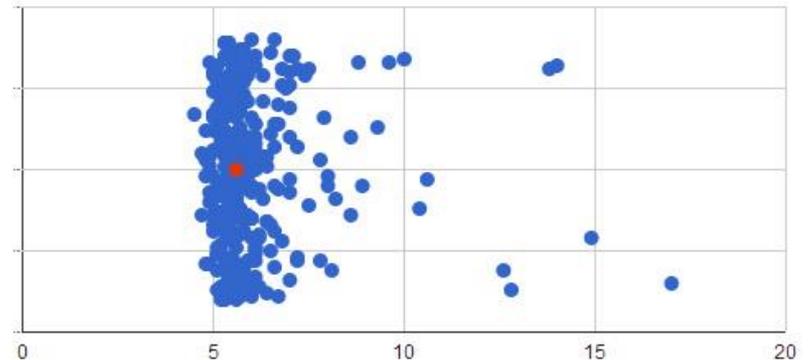
Lowest values: 0.5, 0.5, 0.6, 0.6, 0.6



Hemoglobin A1C (%): [Refresh Plot](#)

Total (N)	Missing	Unique	Min	Max	Mean	StDev	Percentile						
							.05	.10	.25	.50 Median	.75	.90	.95
331	70 (17.5%)	24	4.50	12.60	5.82	1.07	4.95	5.20	5.30	5.50	6.00	6.85	7.50

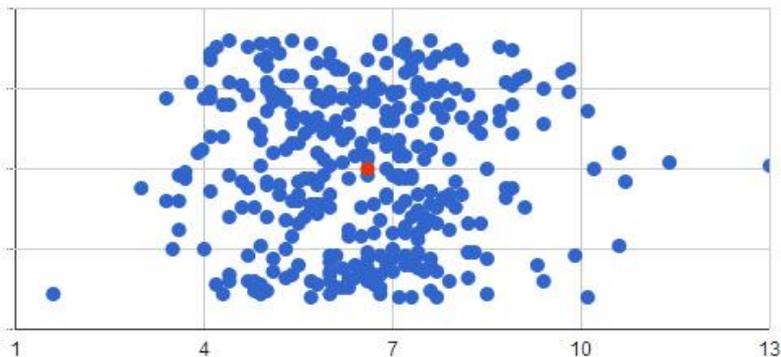
Lowest values: 4.5, 4.8, 4.9, 4.9, 5.0



White Blood Cell (1000/μL): [Refresh Plot](#)

Total (N)	Missing	Unique	Min	Max	Mean	StDev	Percentile						
							.05	.10	.25	.50 Median	.75	.90	.95
348	53 (13.2%)	45	3.40	10.60	6.31	1.43	3.99	4.50	5.15	6.25	7.40	7.95	8.40

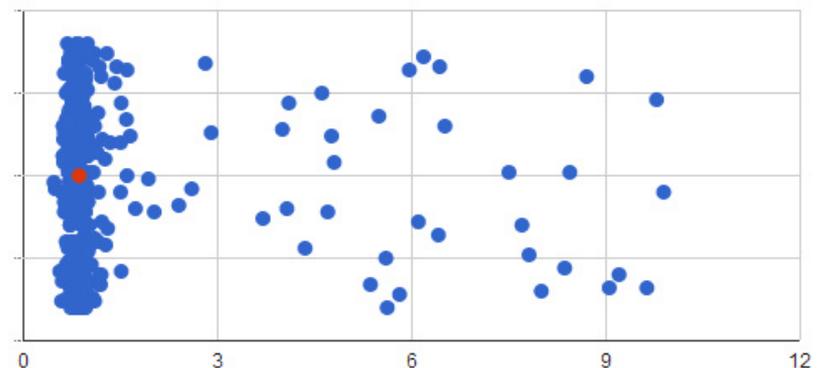
Lowest values: 3.4, 3.4, 3.9, 3.97, 4.0



Creatinine IDMS (mg/dL): [Refresh Plot](#)

Total (N)	Missing	Unique	Min	Max	Mean	StDev	Percentile						
							.05	.10	.25	.50 Median	.75	.90	.95
339	62 (15.5%)	48	0.59	8.70	1.39	1.73	0.62	0.70	0.75	0.86	1.00	2.37	6.90

Lowest values: 0.59, 0.6, 0.61, 0.62, 0.62



What have we learned? Results

- ▣ The great majority of participants **want to continue to stop smoking** after release (in other studies 98% return to smoking post-release without treatment)
- ▣ **Stopping smoking is not quitting** – no matter how long without smoking, **participants continue to report an active addiction** on our surveys
- ▣ People feel their health **improving** relatively quickly (weeks to months)
- ▣ On the street, respiratory conditions lead to frequent hospitalizations; FMC patients, even those with severe COPD, **generally stabilize and haven't required hospitalization or acute care** for respiratory reasons
- ▣ Participants **generally appreciate** being part of a study that may benefit others

What have we learned? Participants

T 1 Provider: Mercado, Sergio

Complaint: Other Problem

Subjective: This is a TSR evaluation. Has been in the tobacco study for over a year now. She has severe COPD and is oxygen dependent. She tells me that for the past 30+ years she has smoked "everything that can be smoked" as far as tobacco that was "easily a pack a day" on average, on top of marijuana, and crack that she also smoked. Says that when she got here she could barely walk more than 5 or 6 steps without gasping for air. Now a year since she stopped smoking she is now able to walk down the hall way without too much trouble. She admits that she still craves cigarettes. especially after she eats and sometimes if she smells it on staff. She prays that when she gets out of here she can have the strength to avoid it. She coughs up a yellowish white phlegm sometimes.

Location: Multiple Locations

Complaint: GENERAL

"I think I'm doing pretty good, feel better, health wise. Smoked most of my life, starting at age 9: When I stopped about 2 years ago, I was smoking 2 1/2 packs a day. Food tastes better, breathing better" Hopefull that he will never smoke again, "I'm on dialysis and a diabetic".

69 year old male with medical history of hypertension, cad (angioplasty with stents in the past 2-3 years ago in San Antonio Texas), arteriol stent in left leg, diabetes, hypercholesterolemia, ckd stage 5 on hemodialysis, left upper arm av fistula, anemia of chronic disease, hepatitis c, umbilical hernia, history of fluid overload and chest pain about one year ago, intermittent claudication, bilateral hip pain and chronic back pain.

n:

- Never tried to quit (Skip to Question 11)
 - Within the last month
 - Within the last year
 - Over 1 year ago
 - Over 5 years ago
-

3. Why did you quit that time? (Please check all that apply)

- Didn't enjoy smoking any more
 - Cost too much
 - Made my health worse
 - Someone else wanted me to quit
 - Forced to quit by others (hospital, work, prison, etc.)
 - Other Didn't want to smoke around my newborn
-

How did you quit with your last attempt? (Please check all that apply)

- No treatment: "cold turkey"
- Smoking program
- Use of nicotine patch or nicotine gum.
- Other medication
- Slowly cut down number of cigarettes until quit

6. Why did you start smoking again? (Please check all that apply)

- Missed it too much
- Was too anxious without it
- Cravings too strong
- Others smoking around me
- No longer forced to quit by others (hospital, work, prison, etc.)
- Other Alcohol & stress

7. Before the Bureau of Prisons, what is the longest time during which you quit and cigarettes?

- Never or less than 1 day
- 1 day to 1 week
- 1 week to 1 month

1. What benefits did you get from smoking that you miss? (Please check all that apply)

- Helped me handle stress
- Kept my weight down
- Something to do with friends and family
- Went well with other things (coffee, drinking, etc.)
- Helped me concentrate
- Other Nothing

2. What have you felt you've gained by stopping? (Please check all that apply)

- Save money
- Improve my health
- Friends or family will be glad
- Tried so many times before, can finally stop
- Can be more active
- Didn't like being addicted to something
- Made my clothes and breath smell bad
- Other _____

QUESTIONS

