Gambling Pathways Interaction with Gambling Treatment Services

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Objectives

- Provide an overview and summary of the Pathways Model of Disordered Gambling.

- Be able to explain the three gambling pathways and how to use the Gambling Pathways Questionnaire.

- Be knowledgeable in how the pathways and other factors impact gambling treatment services.

-   Be able to utilize the Gambling Pathways Questionnaire to improve treatment planning.

Prior to the Pathways Model of Disordered Gambling

- Existing models of problem gambling that came before that of the Pathways Model were the following. Each was distinct but there was also significant overlap among these. Each of these models was developed with the thinking that it would be unilaterally explanatory of the phenomenon of gambling disorder.

- addictions (Jacobs 1986; Blume 1987),

- psychodynamic (Bergler 1958; Rosenthal 1992; Wildman 1997),

- psychobiological (Blaszczynski *et al*. 1986; Carlton & Goldstein 1987; Lesieur & Rosenthal 1991; Rugle 1993; Comings *et al*. 1996),

- behavioural (Anderson & Brown 1984; McConaghy *et al*. 1983),

- Cognitive (Sharpe & Tarrier 1993; Ladouceur & Walker 1996) and sociological (Rosecrance 1985; Ocean & Smith 1993)

The emerging model...

- The previous models are not mutually exclusive and share many common elements.

- Commonalities include:
  - Principles of reinforcement from learning theory are incorporated in addictions, behavioral therapy and biological models to explain why gamblers persist in the addictive behavior.

- The previously discussed models acknowledge biopsychosocial variables in the etiological process of gambling disorder, but also provide emphasis on the operations that account for the progression from the initial gambling episode through to loss of control / impaired control and persistence in the problem gambling behavior.

The emerging model

- Blaszczynski and Nower (2002) noted a faulty assumption embedded within each of those pre-existing models that problem gamblers form are:
  - homogeneous population
  - that theoretically derived treatments can be applied effectively to all problem gamblers
  - irrespective of gambling form, gender, developmental history or neurobiology or other factors.

- Learning theories (Dickerson 1979) – fixed and variable schedules of reinforcement really fail to explain why a small subset of problem gamblers lose control (Sharpe & Tarrier 1993; Ladouceur & Walker 1996).

- Learning theories do underline the distorted and irrational cognitive schemas involved in gambling disorder but lacked empirical evidence to establish a causal significance of these phenomena and that they are not secondary effects of cognitive dissonance

- Psychodynamic approaches (Lesier & Rosenthal, 1991) focus on classic intrapsychic processes that are associated with attempts to deal with unresolved conflicts in previous psychosexual stages, but then see these phenomena variably as compulsive neurosis / impulse disorder along the lines of addictions and perversions. This approach lacks depth.

The emerging model

- Prior to 2002, gambling disorder was thought of as either a categorical disorder or as an end-point on the continuum of gambling involvement.

- Psychodynamic / disease model of addiction provide biological derivates and arge that problem gamblers are categorically distinct from gamblers that do not meet criteria for gambling disorder.

- A search ensued through the decades of gambling research looking for qualitative similarities and differences between "social" gamblers and "disordered" gamblers and other substance use disorders.

- These include:

- personality traits (Blaszczynski, Buhrich & McConaghy 1985; McCormick *et al*. 1987; Castellani & Rugle 1995),

- co-morbidity (Hall *et al*. 2000; Slutske *et al*. 2000; Langenbucher *et al*. 2001) and

- biological correlates (Comings *et al*. 1996; Rugle & Melamed 1993)

The emerging model...in summary

- Prior to 2002 there was no conceptual theoretical model of gambling that would account for what is commonly understood as the multiple biological, psychological, and ecological varaibles contributing to the development of pathology in gambling behavior.

- Advancement in this area had been hampered by a perennial problem in the field of a lack of adequate definitions (still today?) to distinguish between clinical gambling problems, subclinical gambling problems, and more severe pathology.

- DSM-5 has helped greatly to clarify definitions and provide more direction to give a centralized definition and understanding of clinical presentation.

The Pathways Model of Disordered Gambling

- Blaszczynski and Nower (2002) proposed a conceptual model of problem gambling that identifies three distinct subgroups of gamblers that meet diagnostic criteria for a gambling disorder (at that time DSM-IV-TR).

- This model was to account for two areas – 1) how do gamblers arrive at a pathological state of gambling behaviors and 2) clinical presentation of these three subtypes of problem gambling.

- This was to be an explanatory model and does not involve inferences of causation.

- This was not to be a singular model to apply equally and validly to all people suffering from gambling disorder, but instead provides three different subtypes to help clinicians understand the clinical presentation of their clients.

The Pathways Model of Disordered Gambling

- Blaszczynski and Nower (2002) distinguish between problem gambling and "gambling problems," in that there is the argument that not everyone who engages in problematic gambling behaviors will necessarily demonstrate pathology warranting treatment.

- Problem gambling is what Blaszczynski and Nower (2002) refer to as the clinical / pathological presentation of gambling behaviors, whereas gambling problem is a general term to explain any "friction or difficulty in any area of functioning that results from some element of gambling behavior" (p. 488).

- The Pathway Model authors posited that such an approach to gamblers would be met with greater treatment utilization, adherence, and retention by gamblers instead of a use of a singular conceptual model or theory.

The Pathways Model of Disordered Gambling

- Blaszczynski and Nower (2002) addressed:
  - Gamblers with mood disorders
  - Impulsive gamblers
  - Biological correlates of gambling
- Ecological Factors – increased availability, increased accessibility
- Classical and operant conditioning:
  - Arousal/excitement
    - Subjective excitement
    - Physiological arousal
  - Cognitive schemas
    - Irrational beliefs
    - Illusion of control
- Habituation – Pattern of habitual gambling established
- Chasing
  - Chasing wins, losses
  - Losing more than expected

The Pathways Model of Disordered Gambling

Ecological Factors

increased availability, increased accessibility

Classical / operant conditioning

Arousal + excitement
- Subjective excitement
- Physiological arousal

Cognitive schemas
- Irrational beliefs
- Illusion of control

Habituation

Pattern of habitual gambling established

Chasing

Chasing wins, losses

Losing more than expected

Pathology

Problem Gambling and Gambling Disorder

Gambling Pathways Model

Pathway 1

Behaviorally Conditioned

"…gamblers display an absence of premorbid psychopathology and develop problems mainly in response to reinforcement contingencies, cognitive distortions regarding the probability of winning, and the nature of randomness and control."

Pathway 2

Emotionally Vulnerable

"…gamblers present with premorbid mood disorders, a history of poor coping and problem solving skills, childhood disturbances, and major traumatic life events that lead them to gamble for escape from aversive mood states."

Pathway 3

Antisocial, Impulsive

"…gamblers, a likely subset of Pathway 2 gamblers, possess all the vulnerabilities of those in Pathway 2 but are distinguished by biologically-based traits of impulsivity and attentional deficits as well as antisocial personality traits that result in a variety of maladaptive behaviors and comorbid addictions."

Adolescents and the Pathways Model

- **Using a sample of 1,133 adolescents from Quebec and Ontario, the Gupta, Nower, Derevensky, and Blaszczynski (2009):**
  - **(a) test the applicability of the Pathways Model proposed by Blaszczynski and Nower (2002) and Nower and Blaszczynski (2004) for adolescent problem gamblers and refine the model if necessary to accurately differentiate between adolescent and adult problem gamblers, and**
  - **(b) to understand if the Pathways Modle is applicable to adolescents experiencing a substance use disorder in the absence of gambling problems.**

- Results:
  - **The research findings confirm a three cluster categorization of adolescent problem gambler. The three clusters obtained bear great similarity to the three subtypes proposed by Blaszczynski and Nower (2002), although some differences are noted, resulting in minor refinements to the Pathways Model in its application to adolescents.**
  - **Subgroups obtained in the current study are referred to as Cluster 1, Cluster 2, Cluster 3 whereas those proposed in the original model are referred to as Pathway 1, Pathway 2, and Pathway 3.**

Multicultural considerations

- This is a limitation of virtually the whole problem gambling field

- The GPQ and Gambling Pathways Model in general have not been researched enough on diverse populations by biological gender / gender identity, religion, race / ethnicity, or other considerations.

- This limitation needs to be considered as we apply the GPQ as there could be other cultural interpretations of the gambling which can shift how applicable and clinically relevant the GPQ results and the Pathways Model in general are.

- Despite those considerations, the model has contributed to a good direction in the problem gambling treatment field to better understand that overall, problem gamblers are not homogeneous and so treatment should not be either.

- The Pathways Model for problem gambling treatment is the equivalent of person-in-environment, stages of change work, motivational interviewing, person-centered counseling, and other theoretical frameworks that impact our work in substance use treatment and general counseling fields.

Continued validation

- Multiple studies have continued to refine and validate the Gambling Pathways Model and the Gambling Pathways Questionnaire (GPQ):
  - Valleur et al. (2015) – towards a validation of the three pathways model of pathological gambling (ie gambling disorder).
  - Nower and Blaszczynski (2017) – further development and validation of the GPQ
  - Allami, Vitaro, Brendgen, Carbonneau, Lacourse, and Tremblay (2017) - a longitudinal empirical investigation of the pathways model of problem gambling

Gambling Pathways Questionnaire

Alex Blaszczynski and Lia Nower (2002)

Department of Psychology, University of Sydney, Sydney, Australia and Department of Social Work, University of Missouri, St. Louis, Missouri USA

Review! Gambling Pathways Model

Pathway 1

Behaviorally Conditioned

"…gamblers display an absence of premorbid psychopathology and develop problems mainly in response to reinforcement contingencies, cognitive distortions regarding the probability of winning, and the nature of randomness and control."

Pathway 2

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Pathway 3

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"…gamblers, a likely subset of Pathway 2 gamblers, possess all the vulnerabilities of those in Pathway 2 but are distinguished by biologically-based traits of impulsivity and attentional deficits as well as antisocial personality traits that result in a variety of maladaptive behaviors and comorbid addictions."

Gambling Pathways Questionnaire

Pre and Post Mood	Childhood Abuse, Neglect, and Trauma	Stress Coping Motivation	Impulsivity
Meaning Motivation	Risk Taking	Sexual Risk-Taking	Antisocial Traits/ Behaviors

Pathways Scoring Sheet

Mood Pre

Score [ ] + [ ] + [ ] + [ ] = [ ] (1A)
Question # 15 16 17 18 SUM

Mood Post

Score [ ] + [ ] + [ ] + [ ] = [ ] (2A)
Question # 19 20 21 22 SUM

Child Abuse, Neglect & Trauma

Score [ ] + [ ] + [ ] + [ ] + [ ] + [ ] + [ ] = [ ] (3A)
Question # 23 24 25 26 27 28 29 SUM

Stress-Coping Motivation

Score [ ] + [ ] + [ ] + [ ] + [ ] + [ ] + [ ] = [ ] (4A)
Question # 1 5 14 34 40 43 45 SUM

Impulsivity

Score [ ] + [ ] + [ ] + [ ] = [ ] (1B)
Question # 9 12 36 47 SUM

Meaning Motivation

Score [ ] + [ ] + [ ] + [ ] + [ ] = [ ] (2B)
Question # 3 7 11 30 37 SUM

Risk-Taking

Score [ ] + [ ] + [ ] + [ ] = [ ] (1C)
Question # 2 8 33 39 SUM

Sexual Risk-Taking

Score [ ] + [ ] + [ ] = [ ] (2C)
Question # 6 31 42 SUM

Antisocial Traits/Behaviors

Score [ ] + [ ] + [ ] + [ ] + [ ] = [ ] Total
Question # 4 10 13 32 35 +

Score [ ] + [ ] + [ ] + [ ] + [ ] = [ ] Total = [ ] (3C) SUM
Question # 38 41 44 46 48

Trait Severity Scales

Mood Pre & Mood Post (1A) & (2A)		Child Abuse, Neglect & Trauma (3A)	
Low	0-8	Low	0-14
Medium	9-14	Medium	15-22
High	≥15	High	≥23
Stress-Coping Motivation (4A)		**Impulsivity (1B)**	
Low	0-19	Low	0-8
Medium	19-36	Medium	9-18
High	≥37	High	≥19
Meaning Motivation (2B)		**Risk Taking (1C)**	
Low	0-11	Low	0-8
Medium	12-18	Medium	9-18
High	≥19	High	≥19
Sexual Risk-Taking (2C)		**Antisocial Traits/Behaviors (3C)**	
Low	0-4	Low	0-18
Medium	5-10	Medium	19-36
High	≥11	High	≥37

Pathway Scoring:

The number in (1A) is greater than or equal to *12*, ADD 1 _____
The number in (2A) is greater than or equal to *18*, ADD 1 _____
The number in (3A) is greater than or equal to *18*, ADD 1 _____
The number in (4A) is greater than or equal to *35*, ADD 1 _____
The number in (1B) is greater than or equal to *18*, ADD 1 _____
The number in (2B) is greater than or equal to *22*, ADD 1 _____

TOTAL [ ]

If TOTAL (1A+2A+3A+4A+1B+2B) equals 3 or more, then conditions for Pathway 2 have been met.

Conditions for Pathway 2 met?

Yes [ ] No [ ]

The number in (1B) is greater than or equal to *18*, ADD 1 _____
The number in (2B) is greater than or equal to *22*, ADD 1 _____
The number in (1C) is greater than or equal to *15*, ADD 1 _____
The number in (2C) is greater than or equal to *9*, ADD 1 _____
The number in (3C) is greater than or equal to *30*, ADD 1 _____

Sub-Total: _____

The number in (1A) is greater than or equal to *12*,
SUBTRACT 1 from Sub-Total _____

TOTAL [ ]

If TOTAL (1B+2B+1C+2C+3C MINUS 1A) equals 2 or more, then conditions for Pathway 3 have been met.

Conditions for Pathway 3 met?

Yes [ ] No [ ]

If BOTH conditions for Pathways 2 and 3 are met, assign to Pathway 3.
*If NETHER conditions for Pathway 2 or 3 are met, assign to Pathway 1.*

Final Pathway: Pathway 1 [ ] Pathway 2 [ ] Pathway 3 [ ]

Variables

- Pathway Type
- Gender
- Age
- SUD Tx Level/None at start of GTxS
- Length of GTxS
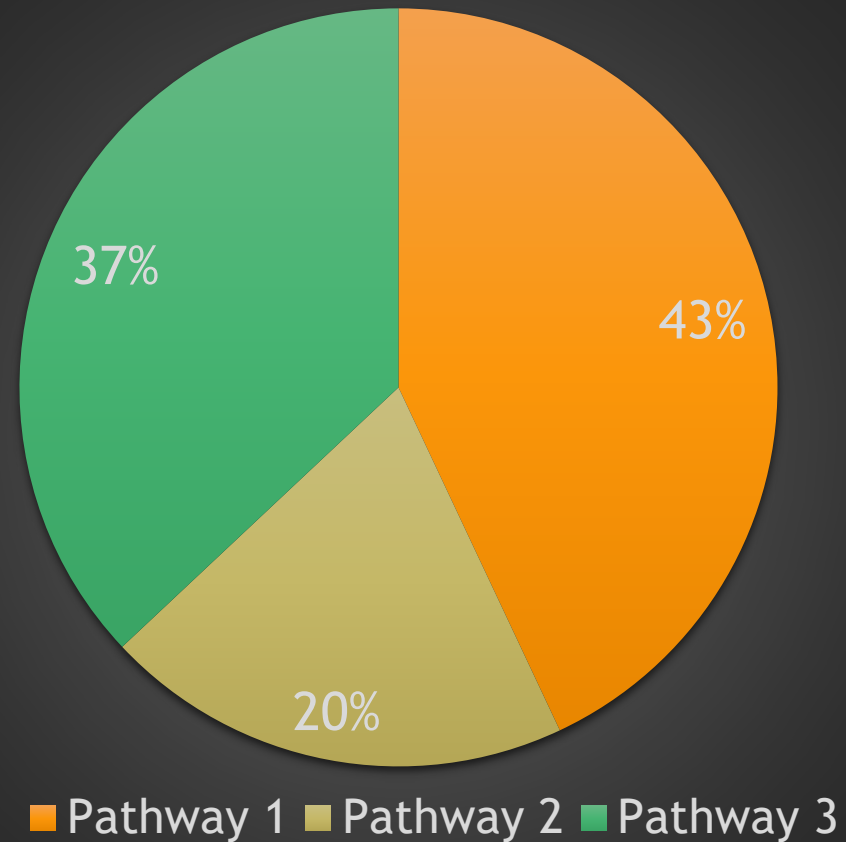- Successful/Unsuccessful SUD TX if any
- Successful/Unsuccesful GTxS

Demographics of Clients

- 54 treatment seeking clients
- Male = 32 (59%)
- Female = 22 (41%)
- Median Age = 41 years old at time of admission
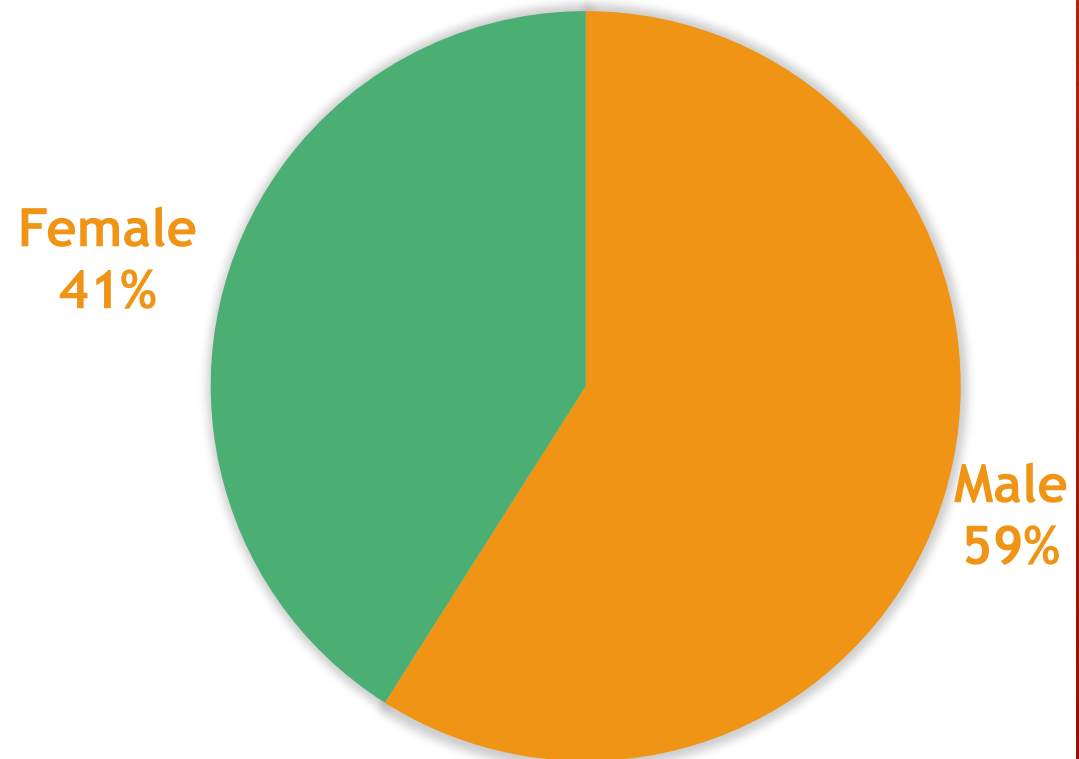
Demographics of Clients

- Pathway 1 – 23 (43%)
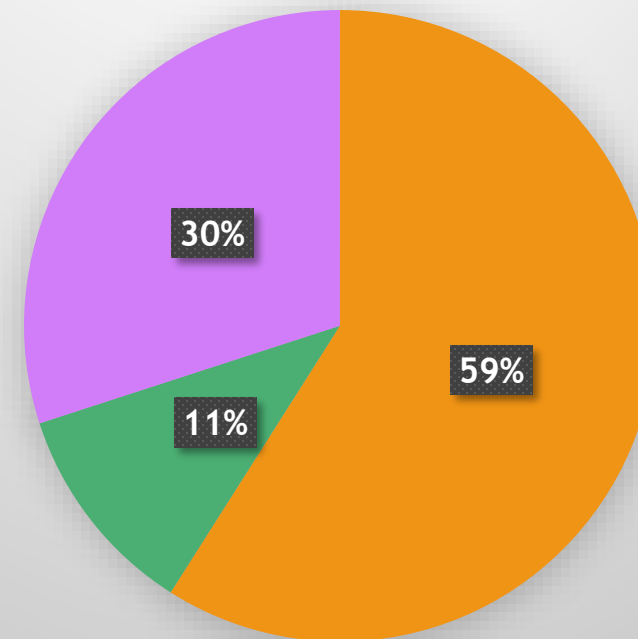- Pathway 2 – 11 (20%)
- Pathway 3 – 20 (37%)

43%

37%

20%

■ Pathway 1 ■ Pathway 2 ■ Pathway 3

Demographics of Clients

- 32 in residential/jail (59%)
- 6 Outpatient (11%)
- 16 No SUD Tx (30%)

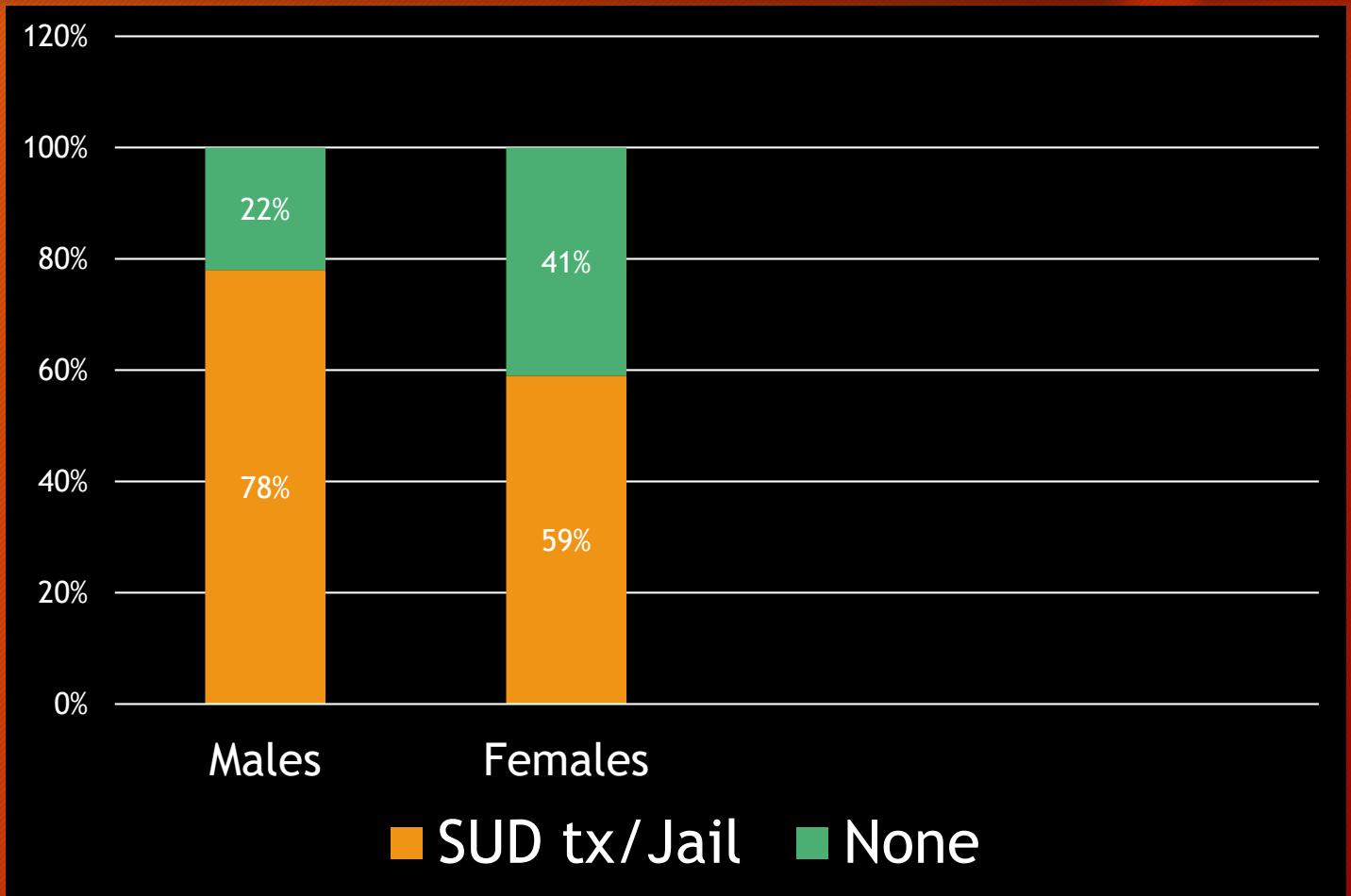Residential /Jail

Outpatient

None

30%

59%

11%

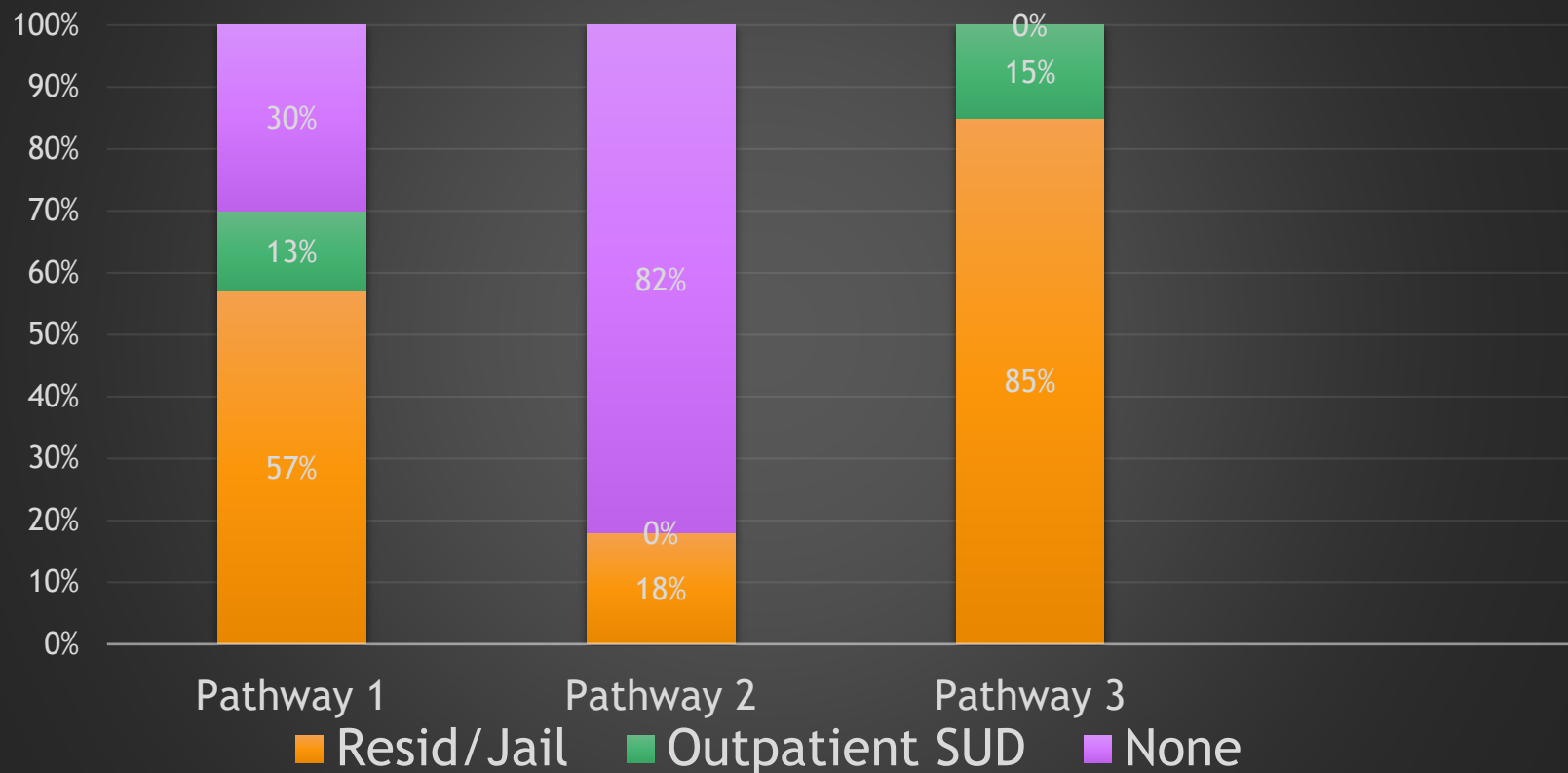# Demographics of Clients

Pathways by Age
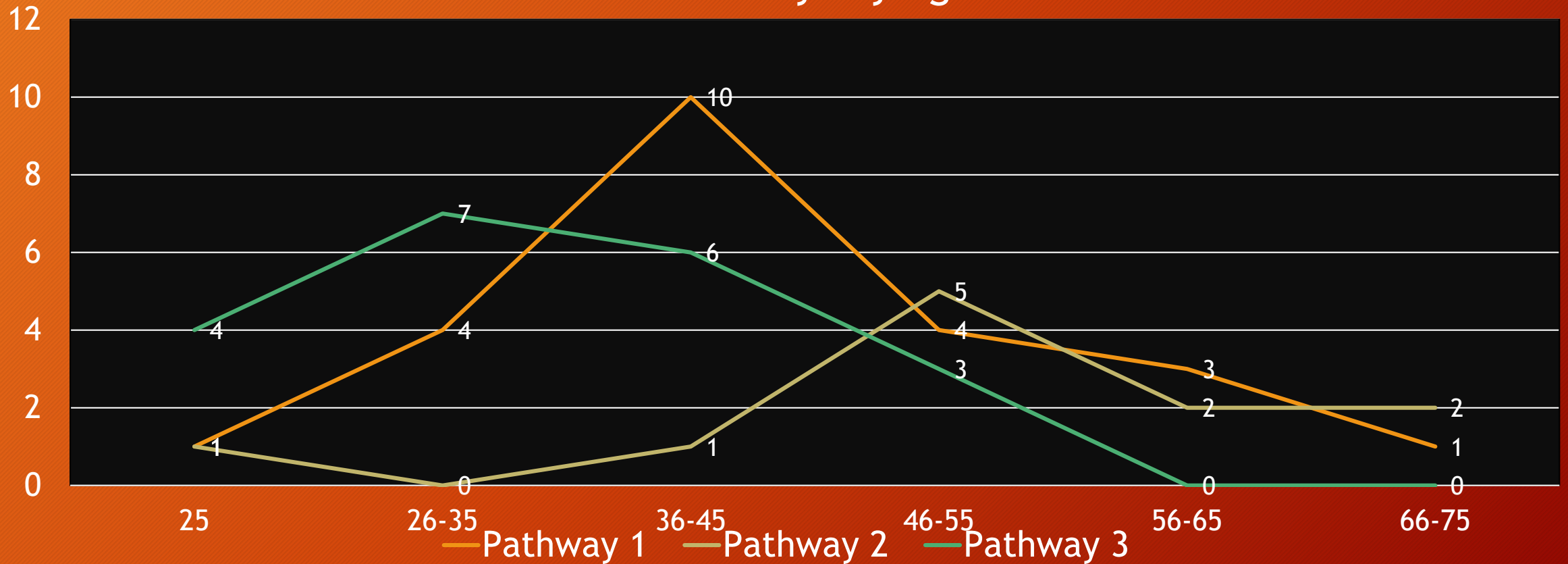
Demographics of Clients

- Males
  - 78% were involved in SUD tx/Jail
  - 22% were not in any SUD tx/Jail

- Females
  - 59% were involved in SUD tx/Jail
  - 41% were not in any SUD tx/Jail

Demographics of Clients

Percentage of SUD Tx Levels in each Pathway

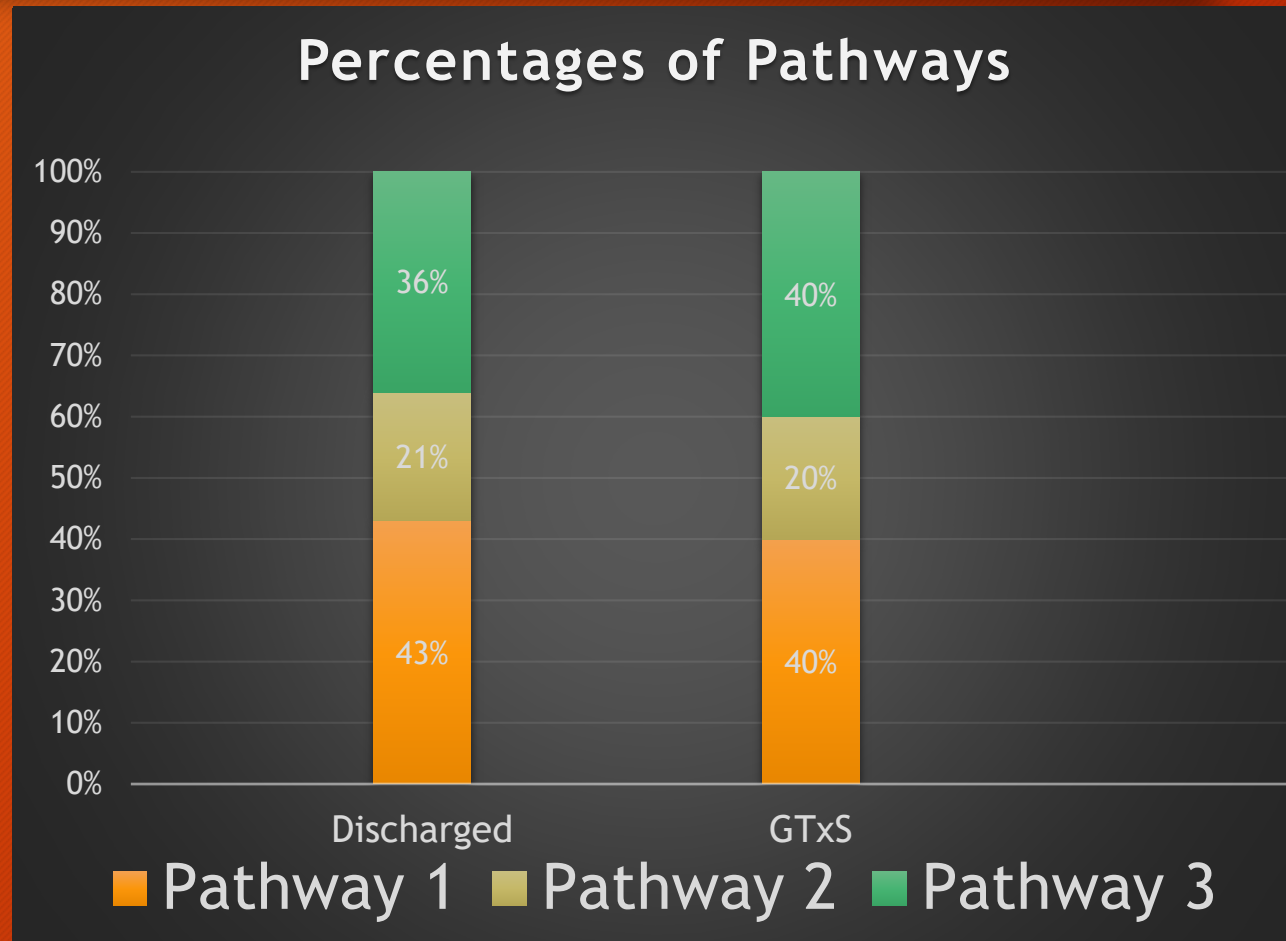|	Pathway 1	Pathway 2	Pathway 3
None	30%	82%	0%
Outpatient SUD	13%	0%	15%
Resid/Jail	57%	18%	85%

Legend: ■ Resid/Jail ■ Outpatient SUD ■ None

Comparison of Discharges and Continuation

- Discharges by Pathways
  - Pathway 1 – 19 (43%)
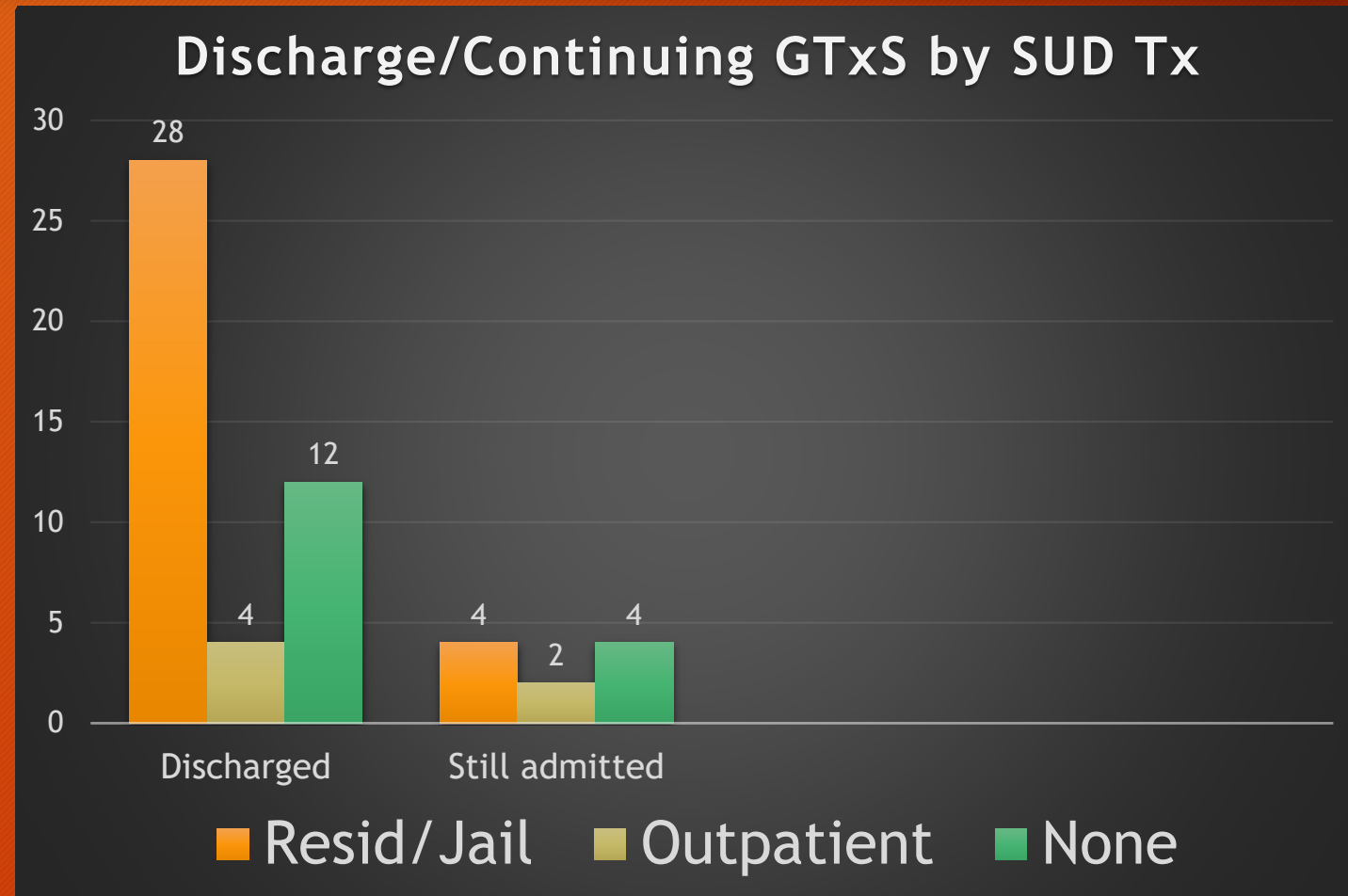 - Pathway 2 – 9 (21%)
  - Pathway 3 – 16 (36%)

- Still in GTxS by Pathways
  - Pathway 1 – 4 (40%)
  - Pathway 2 – 2 (20%)
  - Pathway 3 – 4 (40%)

Percentages of Pathways

	Discharged	GTxS
Pathway 3	36%	40%
Pathway 2	21%	20%
Pathway 1	43%	40%

■ Pathway 1 ■ Pathway 2 ■ Pathway 3

Discharge/Continuing GTxS rates by SUD Tx

- 54 Clients
  - 44 Discharged
  - 10 still admitted

Discharge/Continuing GTxS by SUD Tx

Legend: Resid/Jail, Outpatient, None

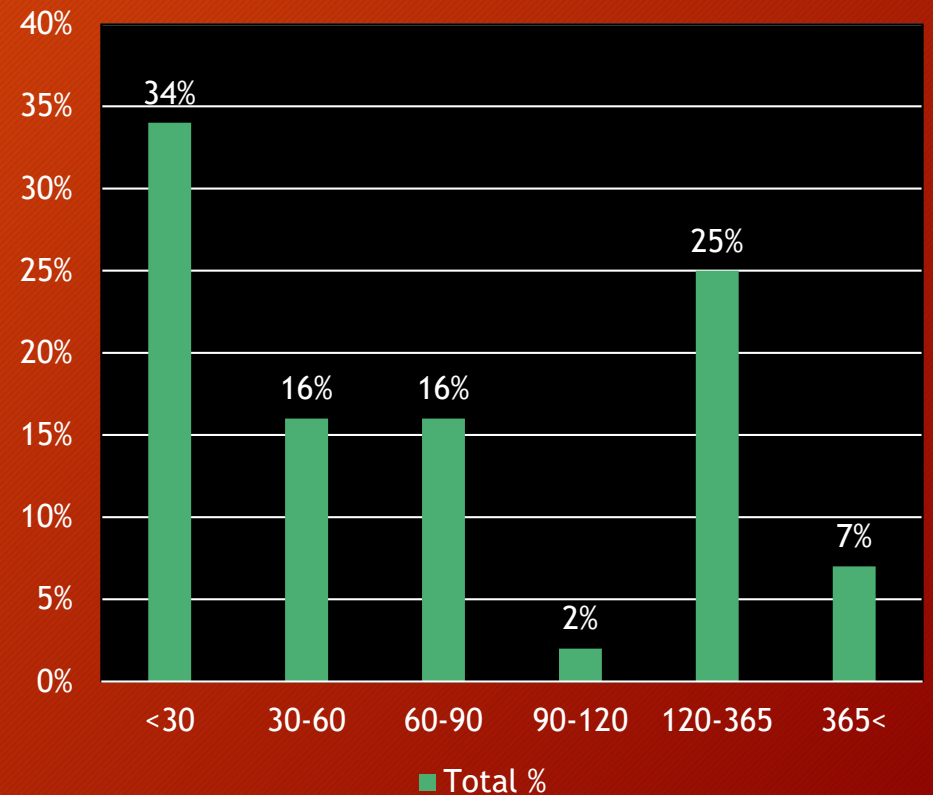| SUD Tx	Discharged	Still admitted
Resid/Jail	28	4
Outpatient	4	2
None	12	4

Length of GTxS

Average # of Days in GTxS – 108.5

Median # of Days in GTxS-   58.5

Total Discharged 44	Pathway 1	Pathway 2	Pathway 3	Totals	Total %
<30	7 (16%)	3 (7%)	5 (11%)	15	34%
30-60	2 (5%)	1 (2%)	4 (9%)	7	16%
60-90	2 (5%)	1 (2%)	4 (9%)	7	16%
90-120	0	0	1 (2%)	1	2%
120-365	6 (13%)	3 (7%)	2 (5%)	11	25%
365<	2 (5%)	1 (2%)	0	3	7%

Total % Length of Time in GTxS

Impact of Pathways on GTxS longevity

Total Discharged 44	Pathway 1	Pathway 2	Pathway 3
<30	7 (36%)	3 (33.5%)	5 (31%)
30-60	2 (11%)	1 (11%)	4 (25%)
60-90	2 11%	1 (11%)	4 (25%)
90-120	0	0	1 (6%)
120-365	6 (31%)	3 (33.5%)	2 (13%)
365<	2 (11%)	1 (11%)	0
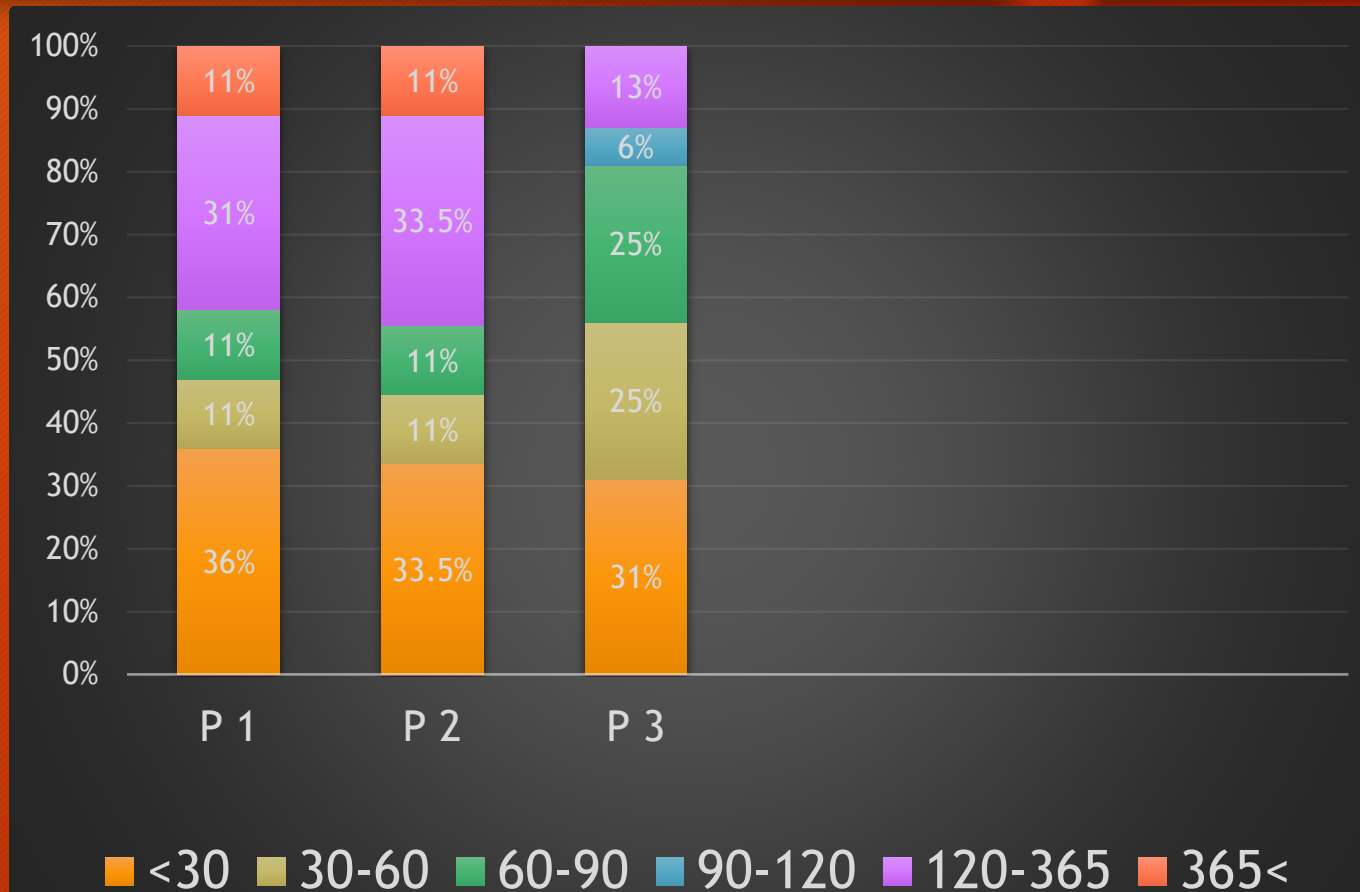
Impacts of Discharges by SUD Tx Levels

- Residential SUD TX - 23
  - Unsuccessful Discharge – 9 (11% completed GTxS)- 1 transferred

  - Successful Discharge – 14 (50% completed GTxS)- 2 transferred

- Jail – 5 (20% completed GTxS)
- Outpatient SUD Tx – 4 (50% completed GTxS)
- None – 12 (67% completed GTxS)

Discharges by Tx level
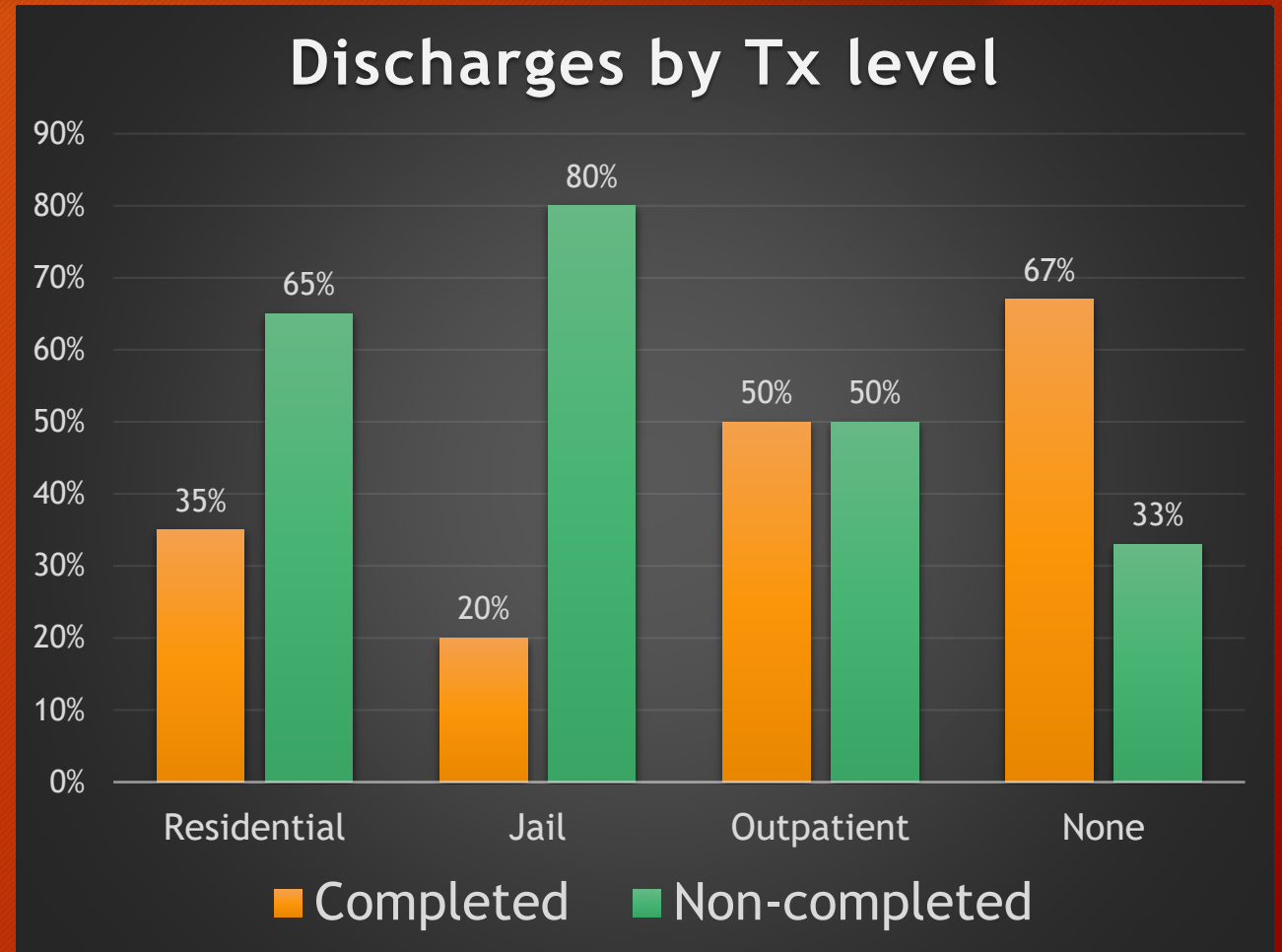
Conclusions of this study

- **How The Gambling Pathways Questionnaire Helps with Treatment Planning**

  - Helps pinpoint areas that need addressed in treatment right from the start.

  - Identifies areas that may otherwise be overlooked.

  - Starts the collaboration process with the client on what to include in the treatment planning. Provides basis to work on specific areas that clients may not have been aware of.

  - Can help counselor estimate probable length of treatment based on pathway.

Conclusions of this study

- 67% of all clients ages 25 or less are Pathway 3

- All Pathway 3 clients are under the age of 55 years with 65% between ages 26-45 years of age.

- 43% of all Pathway 1 clients are between ages 36-45 years of age.

- 45% of all Pathway 2 clients are between ages 46-55 years of age.

- 82% of all Pathway 2 clients are over the age of 36 years.

Conclusions of this study

Regardless of Pathways

- 1/3 of all clients leave treatment within 30 days.
- 2/3 of all clients leave treatment within 90 days.
- 1/4 of all clients leave between 4 months and one year.

By Pathways

- 89% of all Pathways 1 and 2 leave within one year.
- Pathways 3 do not stay beyond one year.
- 81% of Pathway 3 (versus approx. 50% of Pathways 1 and 2) leave within 90 days.

References

- Blaszczynski, A. and Nower, L. (2002) A Pathways Model of Problem and Pathological Gambling. Addictions, 97, 487-499. https://doi.org/10.1046/j.1360-0443.2002.00015.x.

- Nower, L., & Blaszczynski, A. (2016, December 12). Development and Validation of the Gambling Pathways Questionnaire (GPQ). *Psychology of Addictive Behaviors*. Advance online publication.http://dx.doi.org/10.1037/adb0000234