

# BREAKING DOWN THE BARRIERS TO UTILIZING LONG-ACTING INJECTABLE ANTIPSYCHOTICS FOR SCHIZOPHRENIA MANAGEMENT

*This activity has been supported through  
an independent educational grant from  
Alkermes, Inc. and Teva Pharmaceuticals.*



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- **Dr. Greg Mattingly:** Consultant—AbbVie, Alkermes, Axsome, Corium, Eisai, Intracellular, Ironshore, Janssen, Lundbeck, Neos, Neurocrine Biosciences, Noven, Otsuka, Redax, Roche, Rhodes, Sage Therapeutics, Sunovion, Supernus, Takeda, Teva, Trispharma; Grant Research/Support—AbbVie, Acadia, Alkermes, Akili, Axsome, Beohringer, Eisai, Emalex, Idorsia, Intracellular, Janssen, Karuna, Lumos Labs, Medgenics, NLS-1 Plarma AG, Redax, Relmada, Roche, Sage, Sirtsei, Sunovion, Supernus, Takeda, Teva; Speakers Bureau—AbbVie, Alkermes, Corium, Eisai, Intracellular, Ironshore, Janssen, Lundbeck, Neurocrine, Noven, Otsuka, Sunovion, Supernus, Takeda, Trispharma
- **Britney Pridgen:** Speaker's bureau for Alkermes and Otsula
- **Lauren Kennedy:** has no financial relationships to disclose relating to the subject matter of this presentation

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- This activity has been independently reviewed for balance.

# Learning Objectives

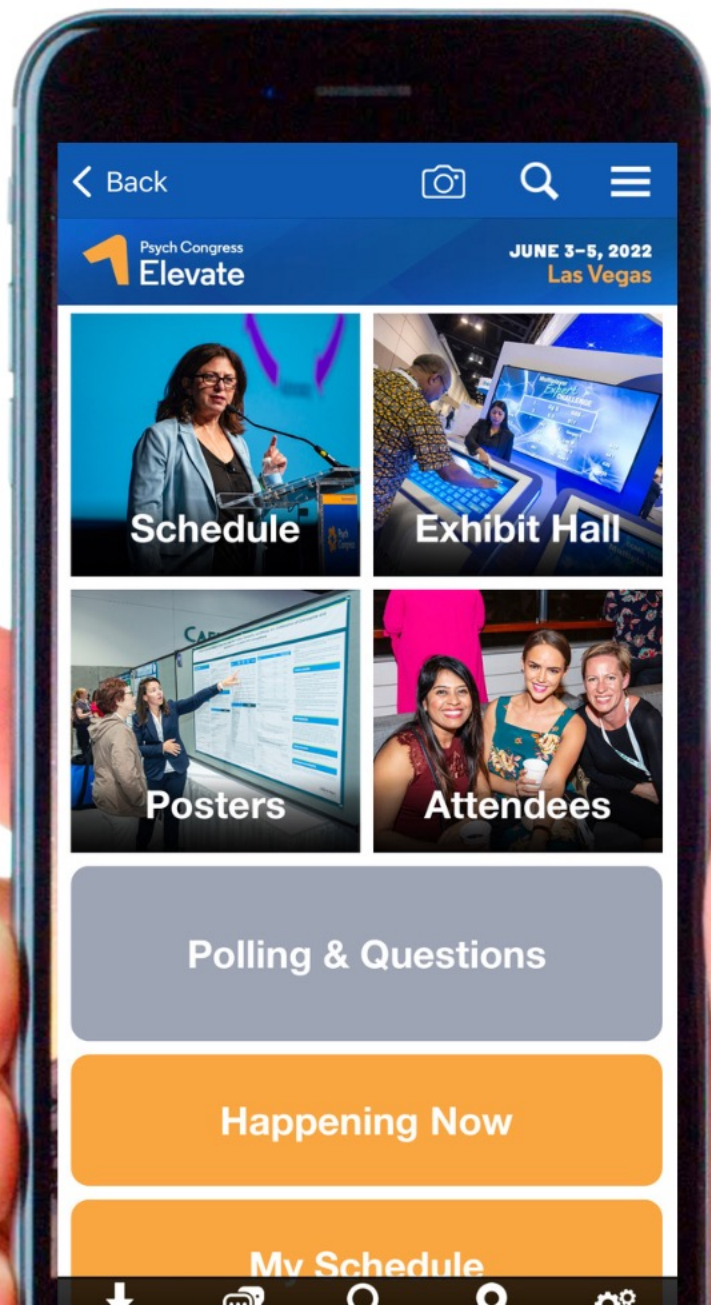


- Assess clinician- and patient-related barriers to optimal schizophrenia treatment, and outline strategies to overcome these barriers
- Evaluate the pharmacology, mechanisms of action, safety and efficacy, and administration considerations associated with Long-Acting Injectables (LAIs)
- Integrate personalized treatment strategies, multidisciplinary care, and patient-centered communication in order to optimize the use of LAIs in clinical practice for the improved long-term management of schizophrenia

# Click on **Polling & Questions** in the App to Participate in this Session

PSYCHOPHARMACOLOGY (OCTAVIUS 11)

You can also scan this QR code

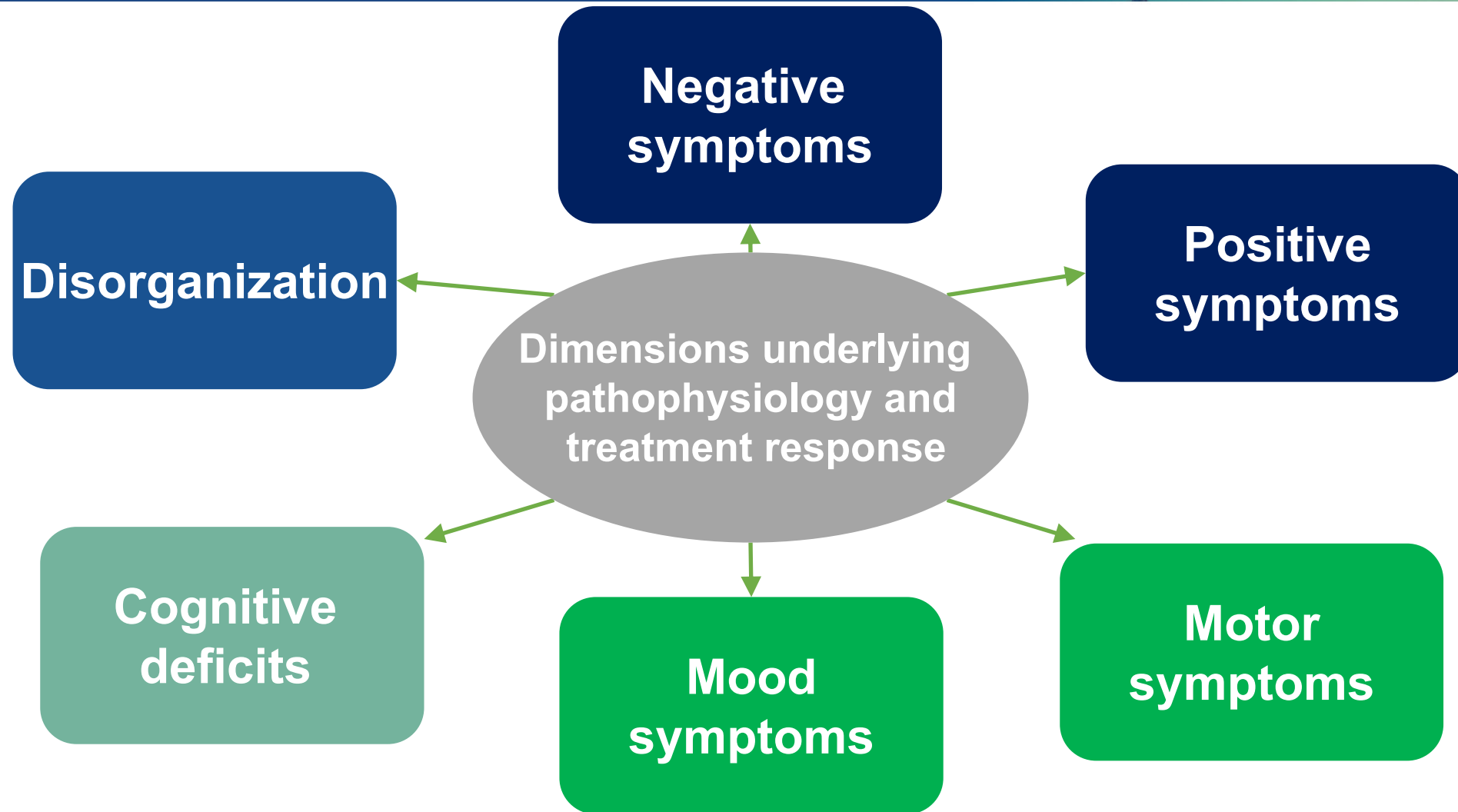


# Meet Lauren

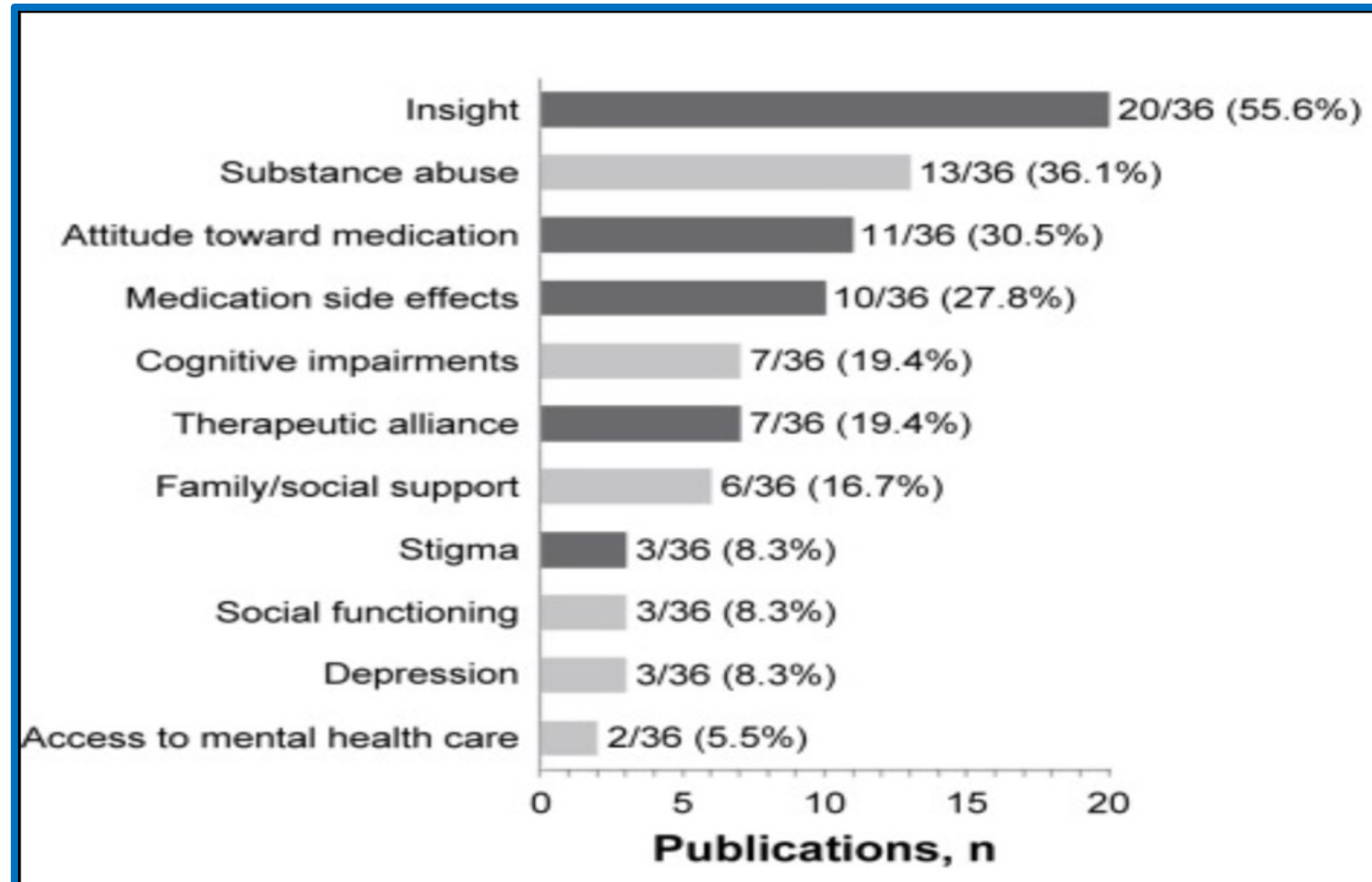
*Clinician and Patient Related Barriers to  
Optimal Schizophrenia Outcomes*



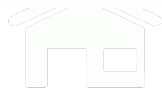
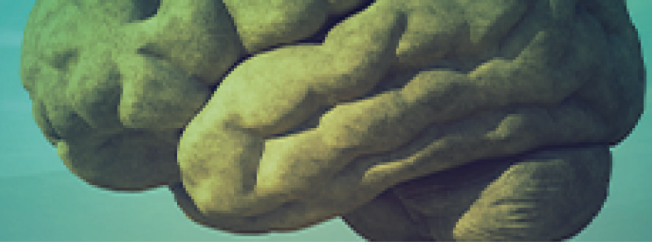
# DSM-5 Domains of Schizophrenia



# Studies Looking at Causes of Antipsychotic Nonadherence

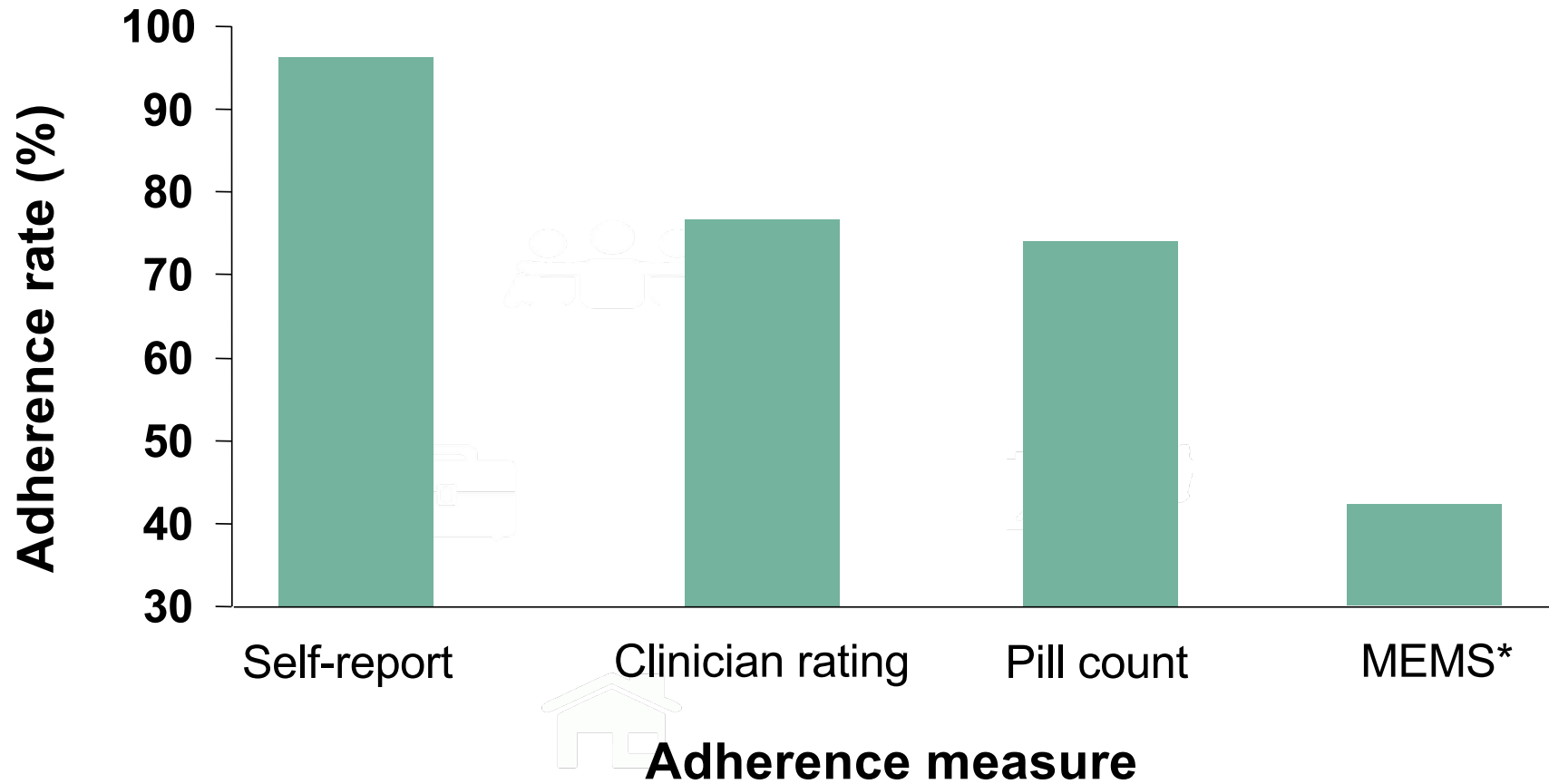


# Medication Event Monitoring System (MEMS®)



**Micro-electronic  
circuit registers times  
when the closure is  
opened/closed**

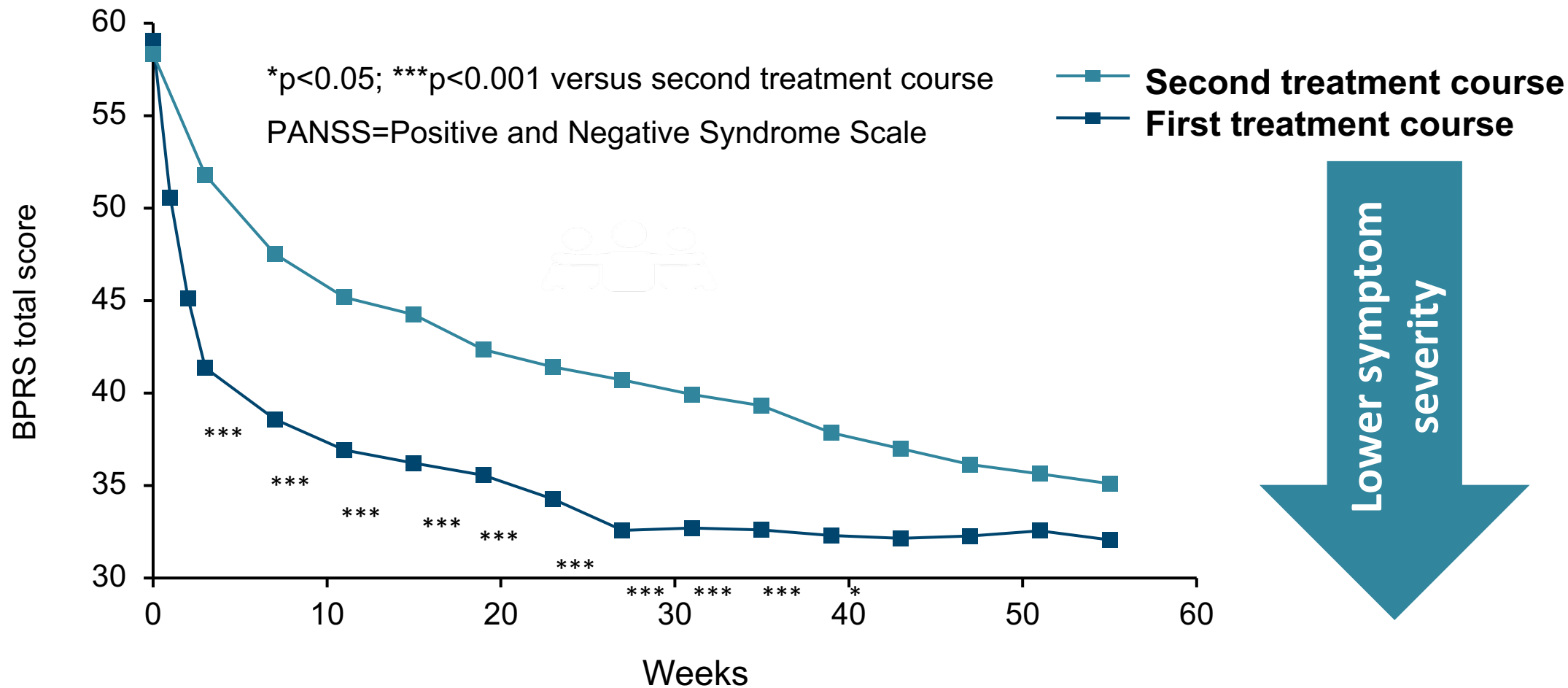
# Adherence to Treatment Among Schizophrenia Outpatients



\*Medication Event Monitoring System (MEMS®)

Remington et al. *Schizophrenia Res.* 2007;90(1-3):229-37.

# Treatment Response: Declines with Each Relapse



BPRS = Brief Psychiatric Rating Scale.

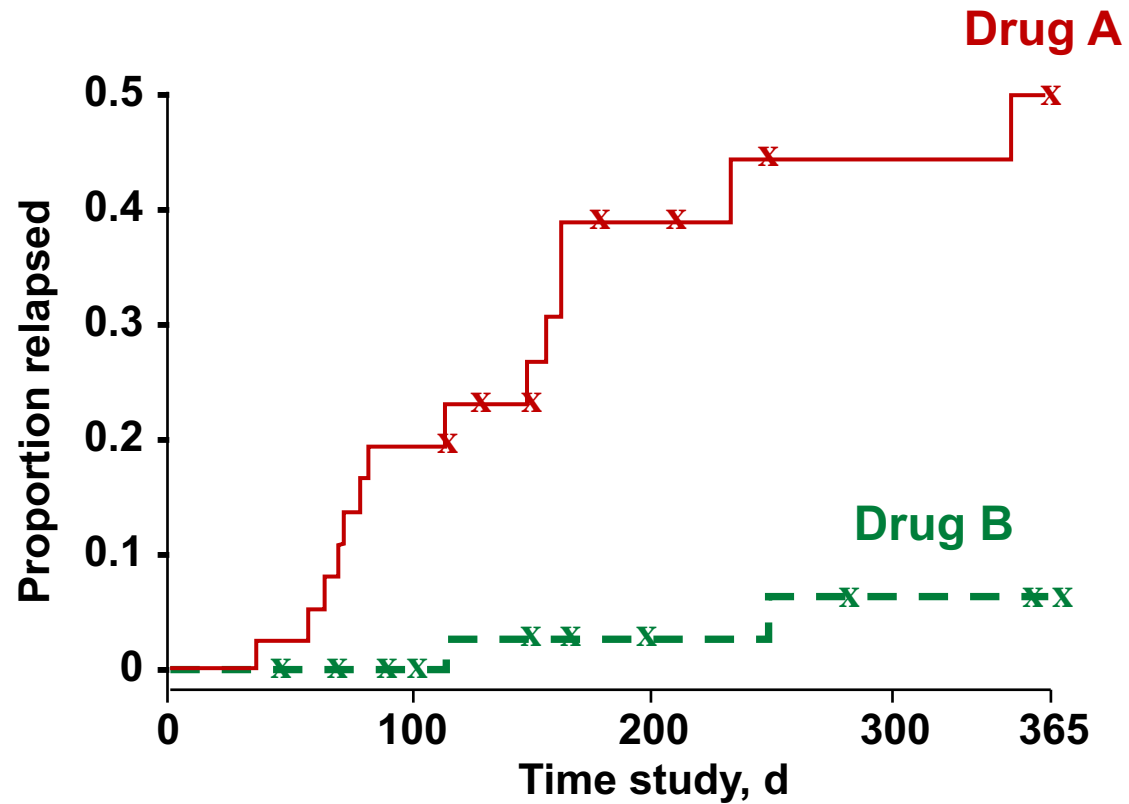
Agid et al. Neuropsychopharmacology 2014;39:S373–S374; 2. Zipursky et al. Poster at ACNP 2014.

# Case Study: James

A person is standing in a vast, hazy landscape. In the foreground, a large, detailed brain is visible, suggesting a connection between the person and the subject of the case study.

- 22 year old
- First break at age 20 while at University
- Two hospitalizations for psychotic episodes
- Now intermittent hallucinations, paranoid and withdrawn
- “I guess I need the medication but I’m not really sure”

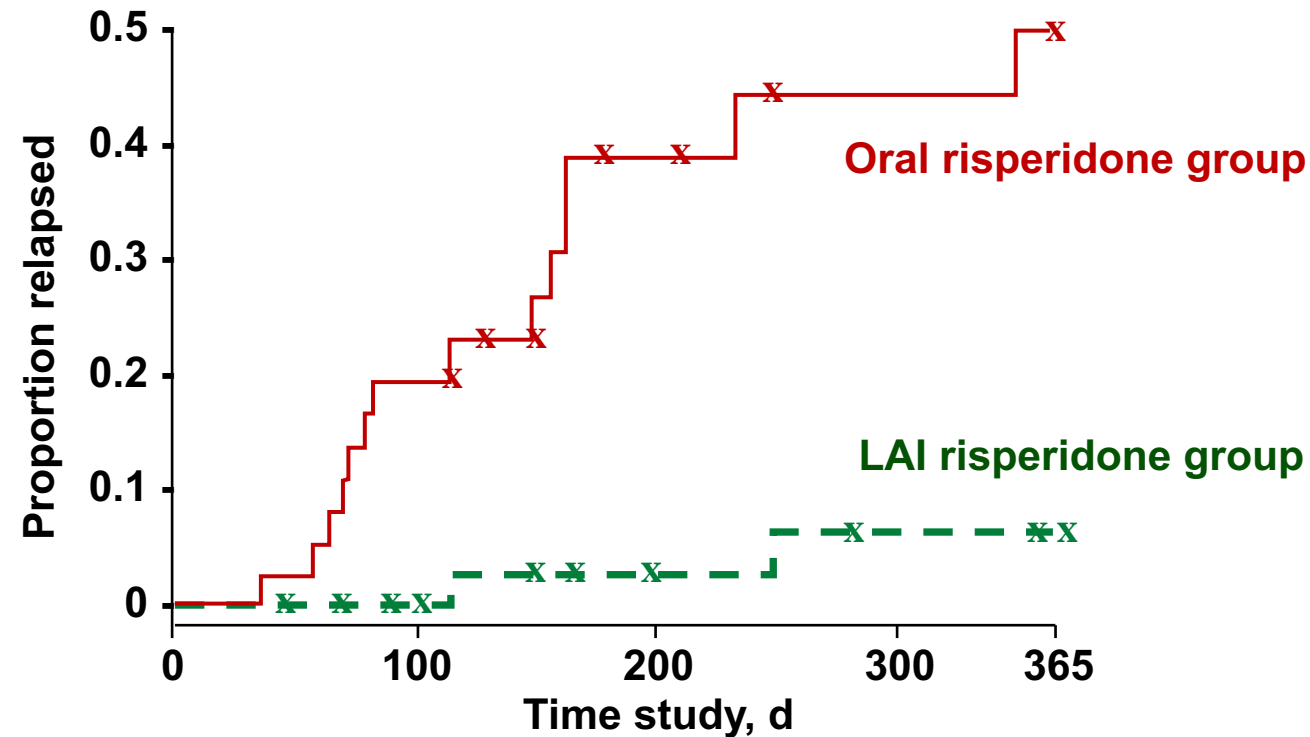
# Which Medicine Would You Choose for Your Son?



# LAI Risperidone vs Oral Risperidone For Relapse Prevention and Control of Breakthrough Symptoms After a Recent First Episode of Schizophrenia: A Randomised Clinical Trial



Time to first psychotic exacerbation and/or relapse as a function of form of medication administration in 83 patients



**No. of Patients**

Oral risperidone group:	43	32	30	30	18
LAI risperidone group:	40	35	30	29	28

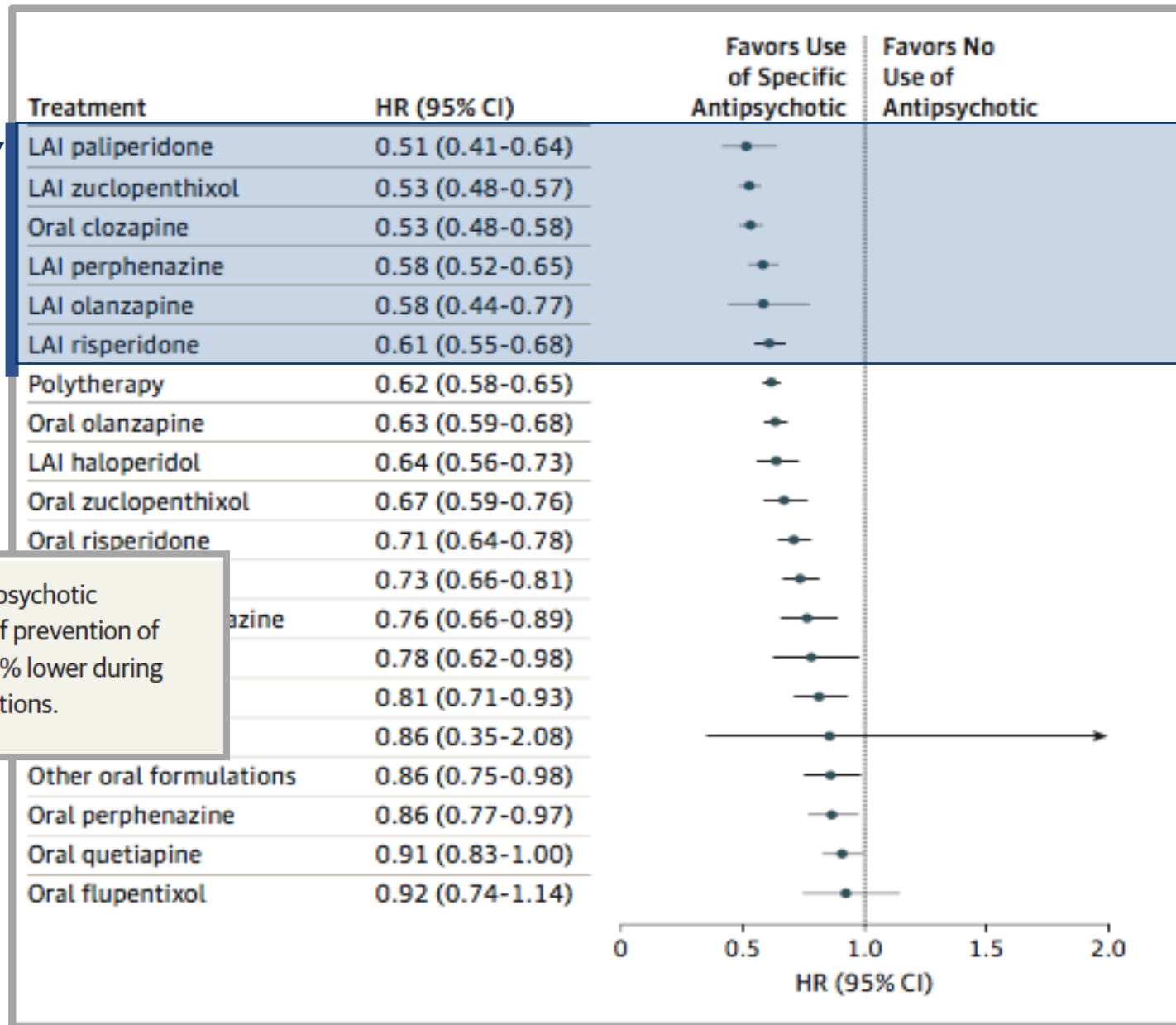
Risk of exacerbation and/or relapse over time was significantly lower for the LAI risperidone group than for the oral risperidone group; x indicates censored data.

Subotnik KL, et al. *JAMA Psychiatry*. 2015;72(8):822–829.

# Long acting Injectables (LAIs) Reduce Psychiatric Rehospitalisation

**CONCLUSIONS AND RELEVANCE** Clozapine and long-acting injectable antipsychotic medications were the pharmacologic treatments with the highest rates of prevention of relapse in schizophrenia. The risk of rehospitalization is about 20% to 30% lower during long-acting injectable treatments compared with equivalent oral formulations.

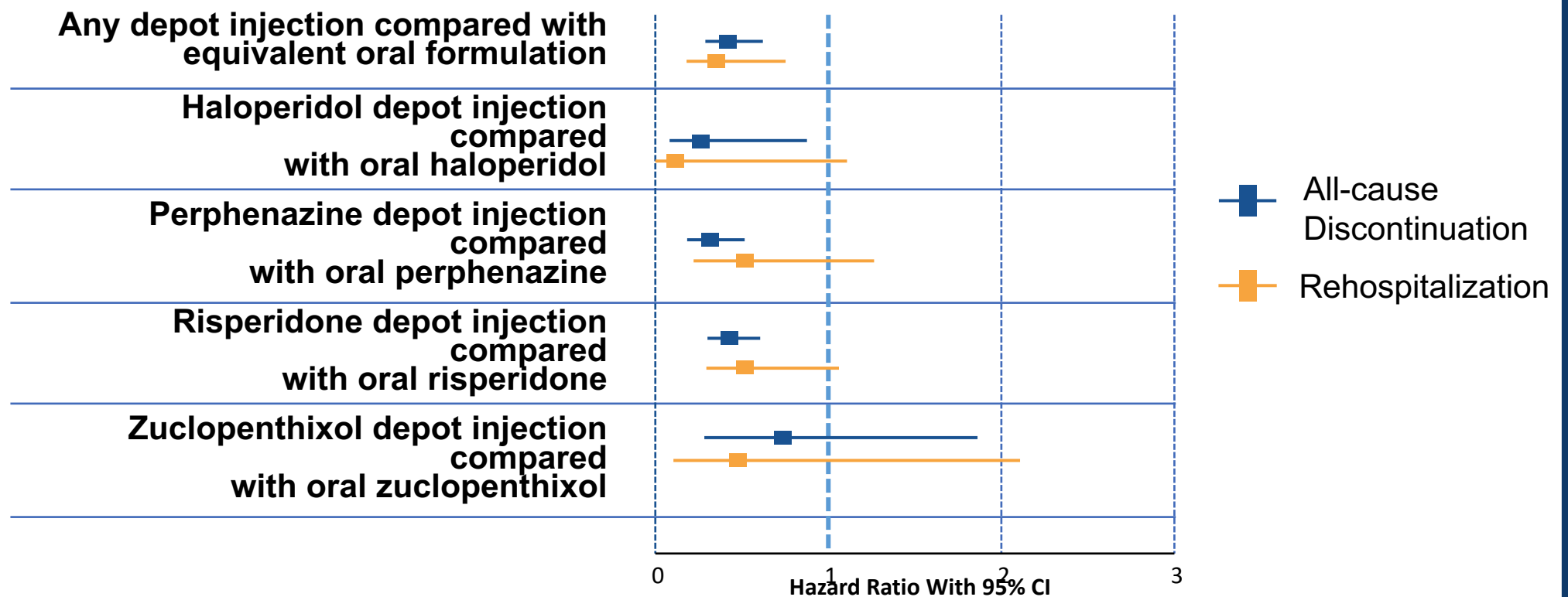
- **13,042 of 29,823 patients were rehospitalized-43.7%**
- **22% decreased hospitalization with LAI treated individuals**
- **33% decreased hospitalization with LAI in newly diagnosed cases**



# LAI Antipsychotics Significantly Improve Treatment Outcomes in Patients With Schizophrenia



## Risk of discontinuation or rehospitalization after a first hospitalization for schizophrenia, by antipsychotic treatment (N=2588)

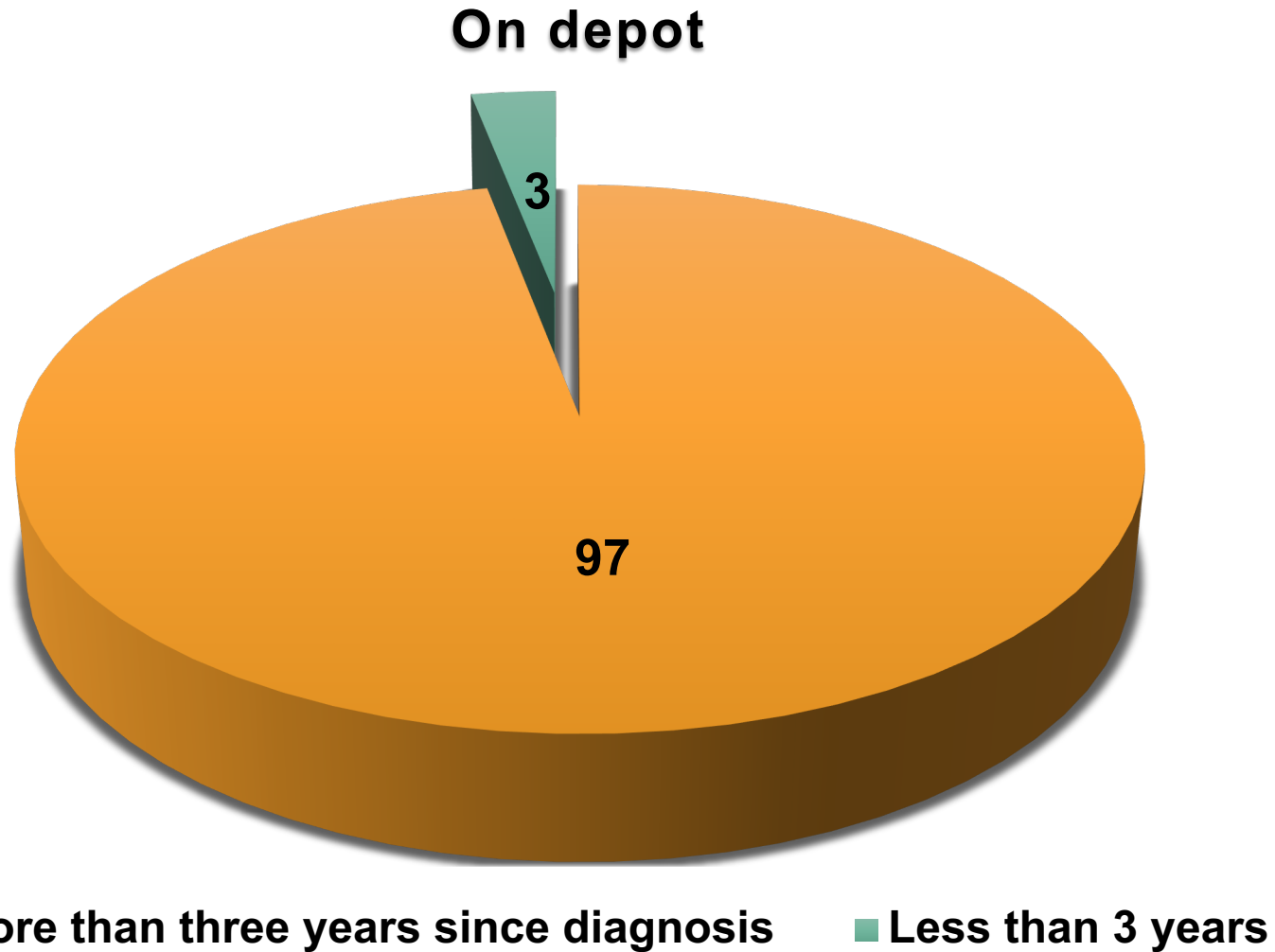


CI = confidence interval; LAI=long-acting injectable.  
Tiihonen J et al. Am J Psychiatry. 2011;168(6):603-609.

# When Would You Want a LAI if it Was Your Son?



# Who Gets LAI Treatment?



# LAI Options in the United States

A human brain is shown in the top right corner, rendered in a greenish-yellow color. In the background, a person is standing in a field under a blue sky.

## First-generation antipsychotics (all are in sesame seed oil)

- **Haloperidol** decanoate, usually once monthly
- **Fluphenazine** decanoate, usually every 2 weeks

## Second-generation antipsychotics (all IM formulations are water-based)

- **Risperidone LAIs**
  - Risperidone microspheres every 2 weeks
  - Risperidone subcutaneous LAI once monthly
- **Paliperidone LAIs**
  - Paliperidone palmitate monthly
  - Paliperidone palmitate every 3 months
  - Paliperidone palmitate every 6 months
- **Aripiprazole LAIs**
  - Aripiprazole monohydrate once monthly
  - Aripiprazole lauroxil once monthly, every 6 weeks, or every 2 months
- **Olanzapine** pamoate every 2 weeks or once monthly

# LAI in the Pipeline



## Risperidone formulations

- Risperidone subcutaneous LAI, every 1 or 2 months (Teva)
- Risperidone intramuscular LAI once monthly (Rovi)

## Aripiprazole formulations

- Aripiprazole monohydrate every 2 months (Otsuka/Lundbeck)

# Picking and Choosing



# Side Effect Profiles

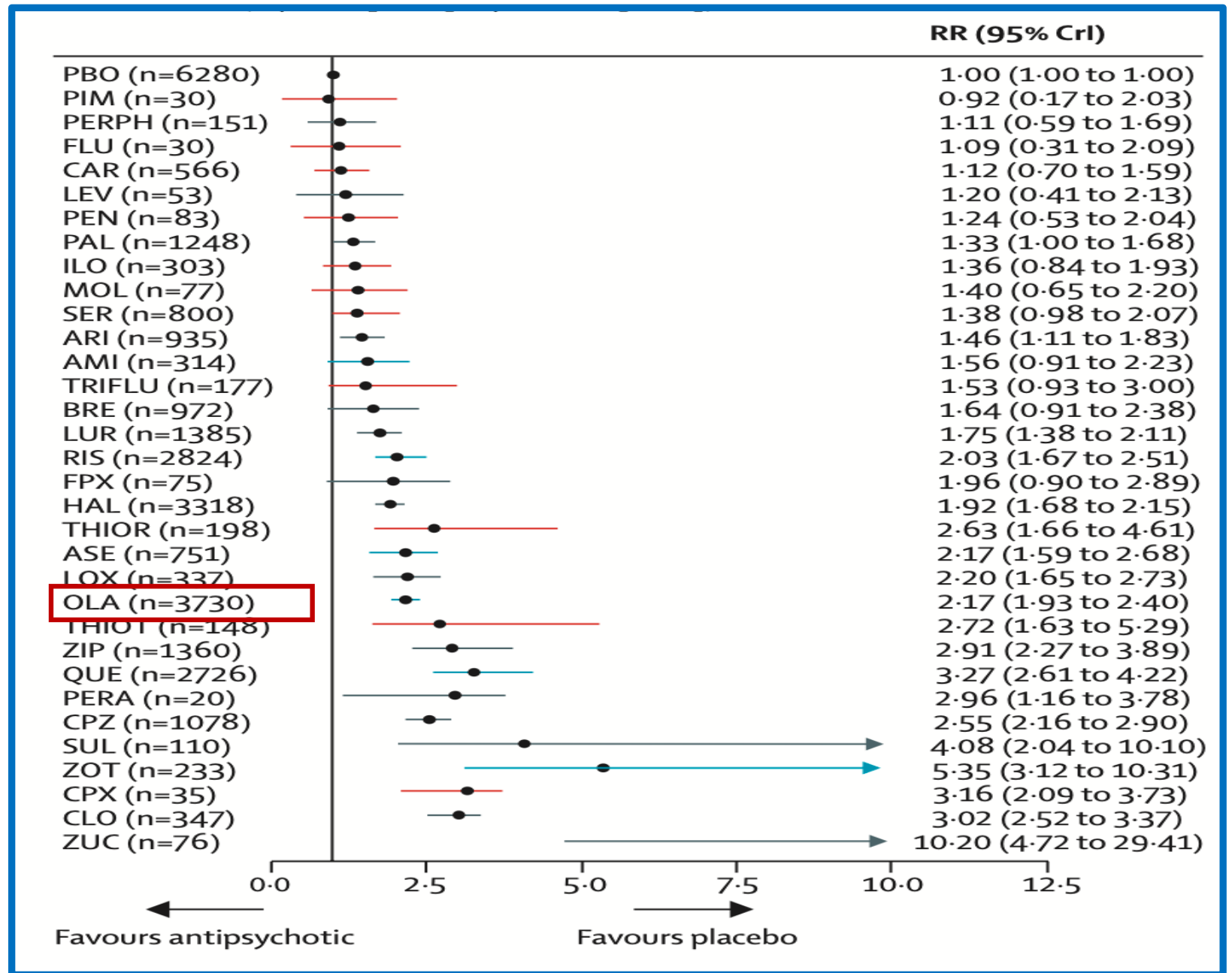


Atypical Antipsychotic	Sedation	Weight gain	Diabetes	EPS	Anti-cholinergic	Hypotension	Prolactin elevation
Amisulpride	-	+	+	+	-	-	+++
Aripiprazole	-	+/-	-	+/-	-	-	-
Asenapine	+	+	+/-	+/-	-	-	+/-
Clozapine	+++	+++	+++	-	+++	+++	-
Iloperidone	-	++	+	+	-	+	-
Olanzapine	++	+++	+++	+/-	+	+	+
Paliperidone	+	++	+	+	+	++	+++
Quetiapine	++	++	++	-	+	++	-
Risperidone	+	++	+	+	+	++	+++
Ziprasidone	+	+/-	-	+/-	-	+	+/-

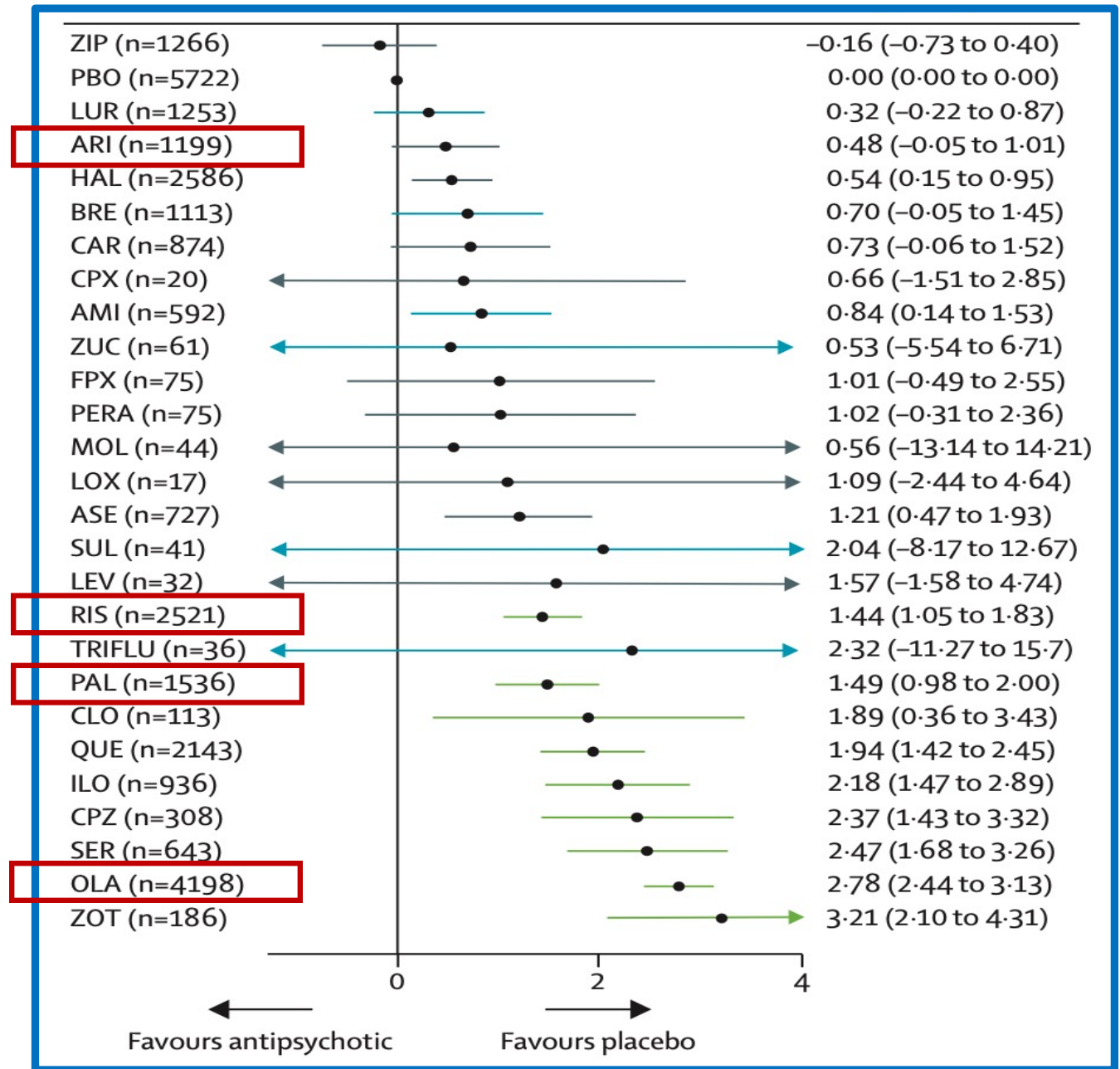
+++ = high; ++ = moderate; + = low; - = very low incidence/severity. This table is made up of estimates of relative incidence and/or severity, based on clinical experience, manufacturers' literature and published research. Other side effects not mentioned in this table do occur

# Sedation

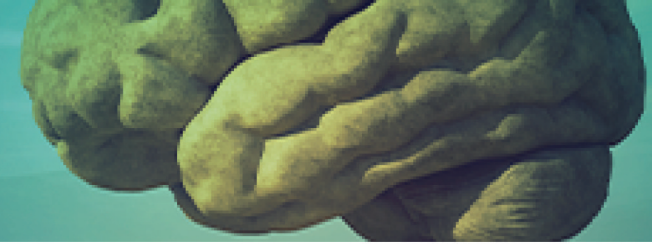
## Comparative Efficacy And Tolerability of 32 Oral Antipsychotics



# Weight Gain



# Olanzapine Induced Weigh Gain

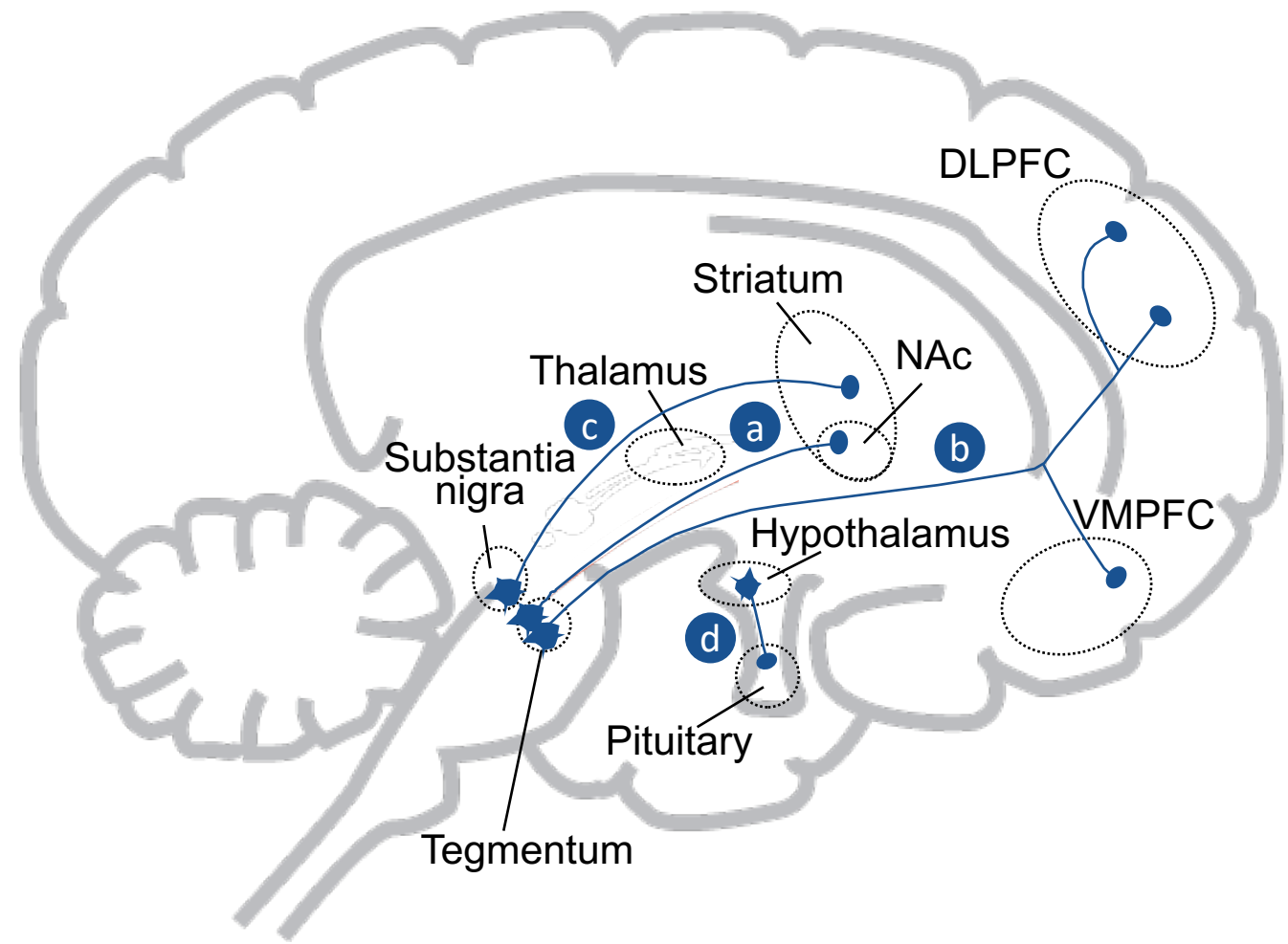


<b>Amount Gained kg (lb)</b>	<b>6 Weeks (N=7465) (%)</b>	<b>6 Months (N=4162) (%)</b>	<b>12 Months (N=1345) (%)</b>	<b>24 Months (N=474) (%)</b>	<b>36 Months (N=147) (%)</b>
≤0	26.2	24.3	20.8	23.2	17.0
0 to ≤5 (0-11 lb)	57.0	36.0	26.0	23.4	25.2
>5 to ≤10 (11-22 lb)	14.9	24.6	24.2	24.1	18.4
>10 to ≤15 (22-33 lb)	1.8	10.9	14.9	11.4	17.0
>15 to ≤20 (33-44 lb)	0.1	3.1	8.6	9.3	11.6
>20 to ≤25 (44-55 lb)	0	0.9	3.3	5.1	4.1
>25 to ≤30 (55-66 lb)	0	0.2	1.4	2.3	4.8
>30 (>66 lb)	0	0.1	0.8	1.2	2

**Average weight gain of 24.6 pounds with long term use**

# Dopaminergic Pathways in the Brain

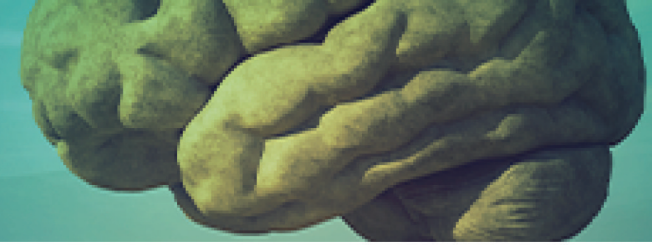
Which pathway is more important?



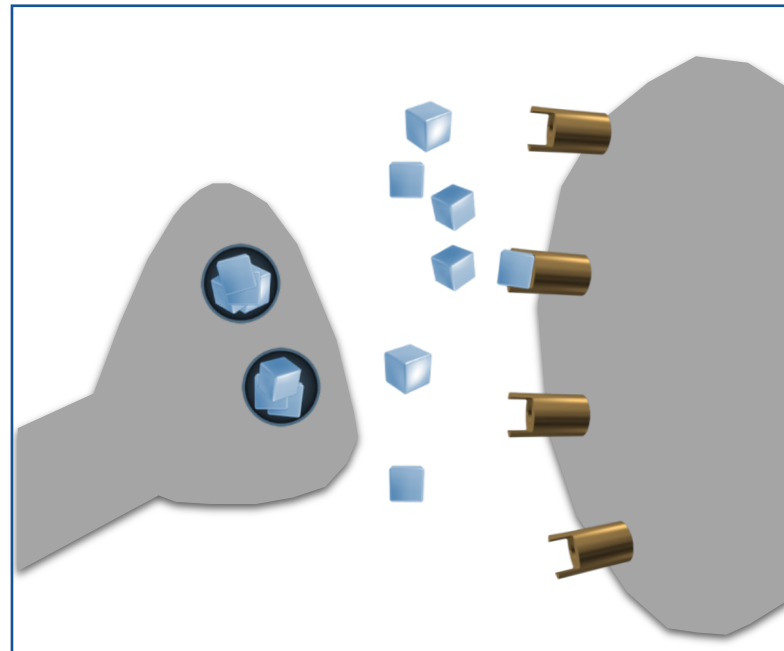
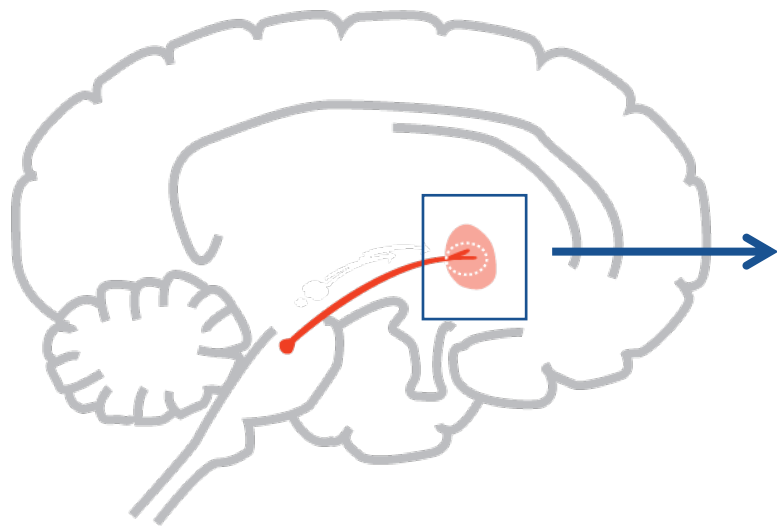
- a** Mesolimbic
- b** Mesocortical
- c** Nigrostriatal
- d** Tuberoinfundibular

DLPFC = dorsolateral prefrontal cortex; Nac = nucleus accumbens; VMPFC = ventromedial prefrontal cortex.  
Stahl. Stahl's Essential Psychopharmacology. 4th edition, 2013, Cambridge University Press.

# The Mesolimbic Dopamine Hypothesis of Positive Symptoms of Schizophrenia



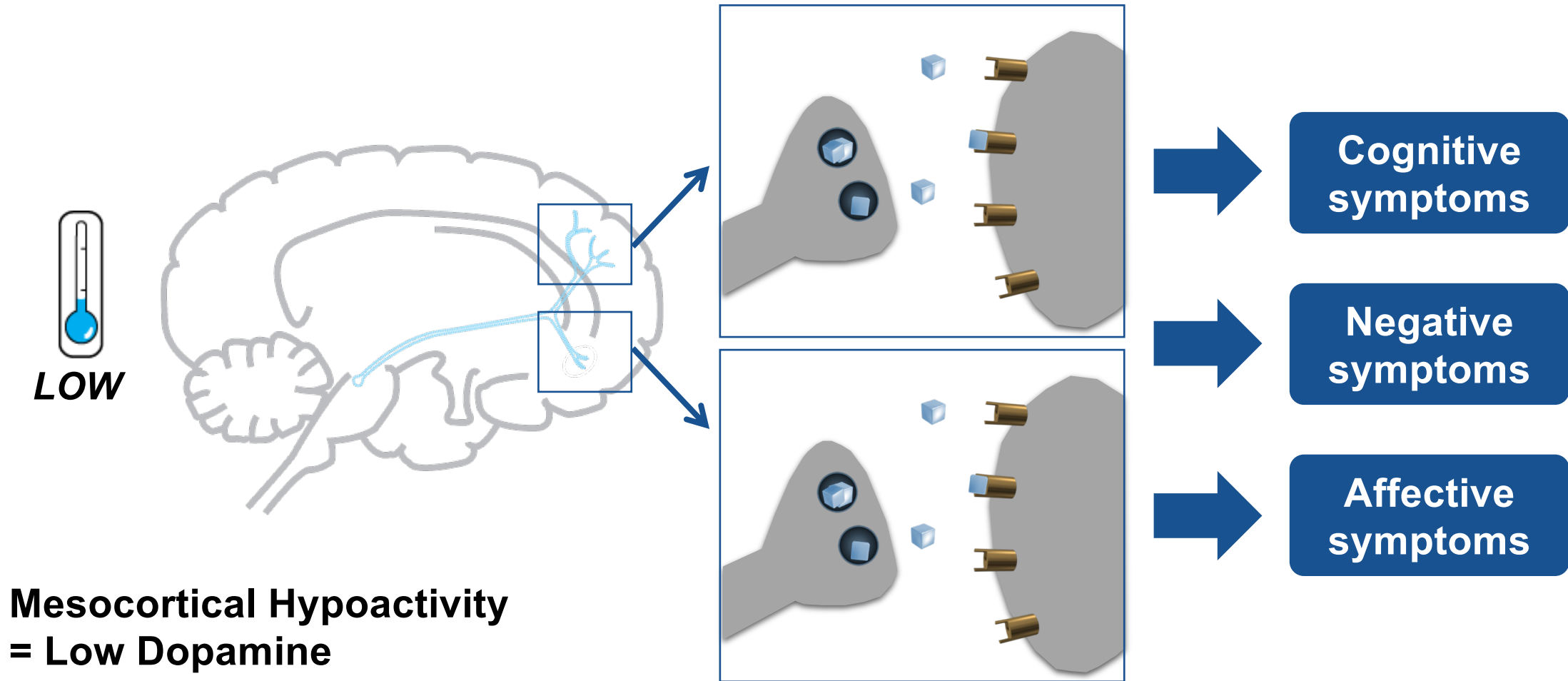
**HIGH**



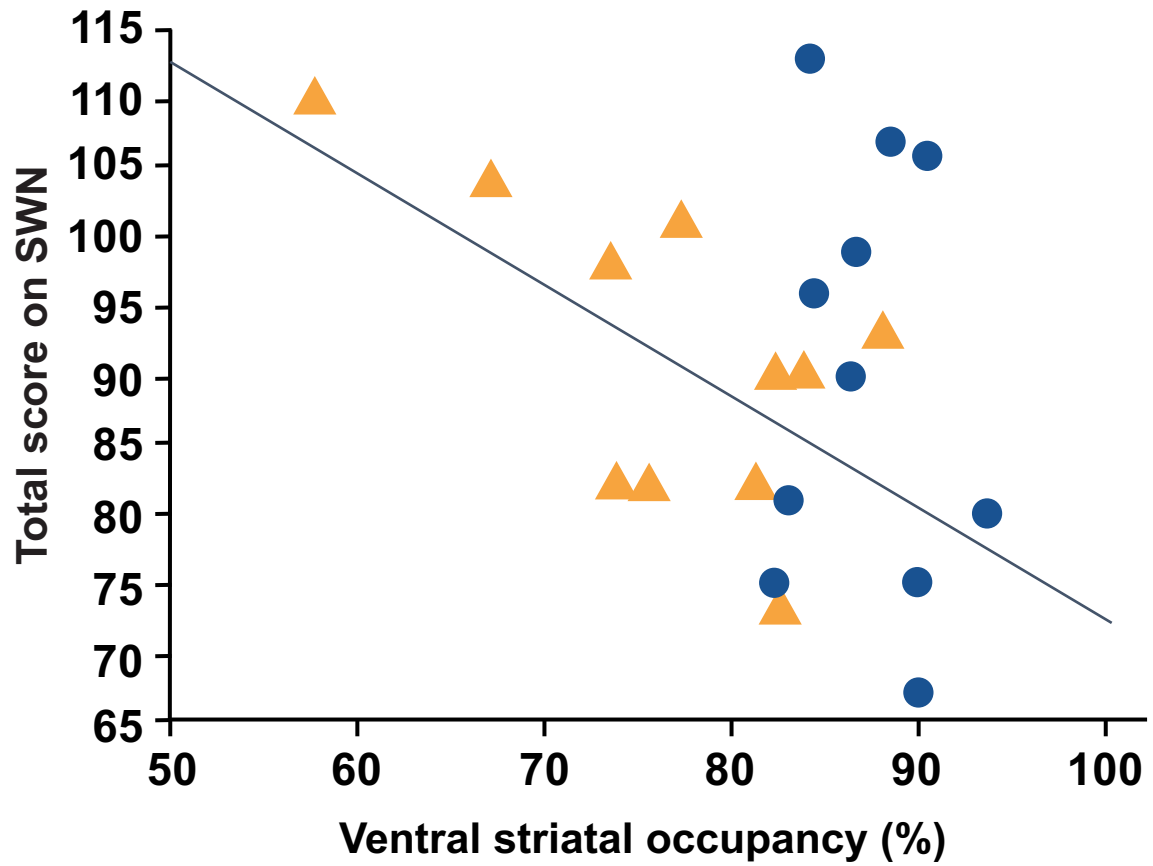
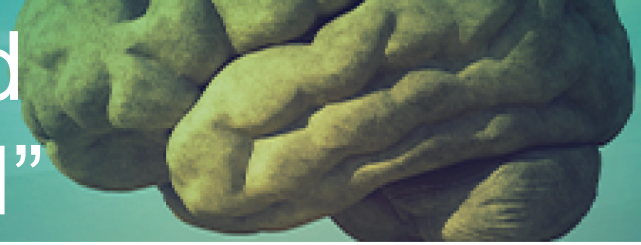
**Positive symptoms**

**Mesolimbic Hyperactivity  
= Excessive Dopamine**

# The Mesocortical Dopamine Hypothesis of Cognitive, Negative, and Affective Symptoms of Schizophrenia



# Relationship Between Striatal Blockade and Total Score on Subjective Well Being “SWN”



Partial agonist-treated (aripiprazole; ● )  
Full antagonist antipsychotic-treated (risperidone or olanzapine; ▲ )

- No significant correlation between SWN score and D<sub>2</sub> occupancy value at the ventral striatum with partial agonist-treated patients
- As expected, there was a negative association between D<sub>2</sub> occupancy in the ventral striatum and SWN in patients treated with antagonist antipsychotics

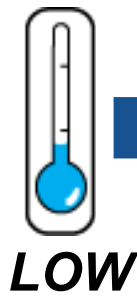
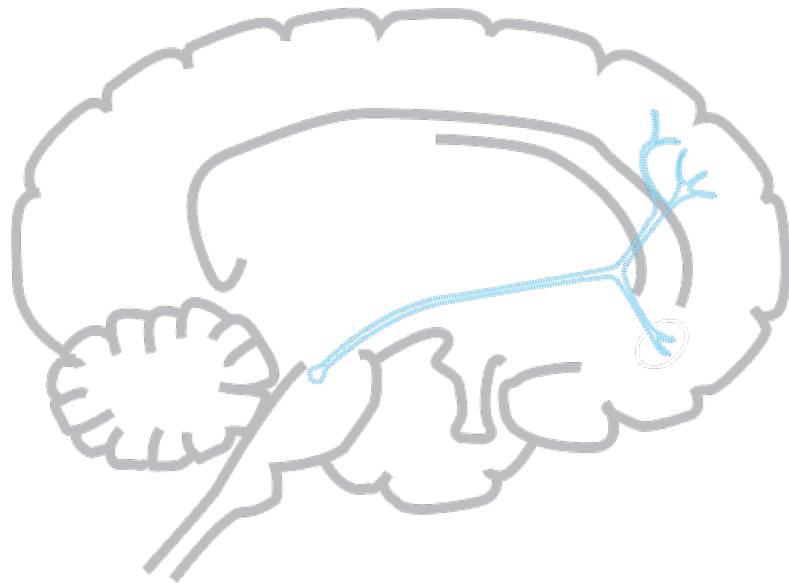
SWN = Subjective Well-Being Under Neuroleptics Scale.

Mizrahi R, et al. The relationship between subjective well-being and dopamine D<sub>2</sub> receptors in patients treated with a dopamine partial agonist and full antagonist antipsychotics. *Int J Neuropsychopharmacol.* 2009;12:715–721.

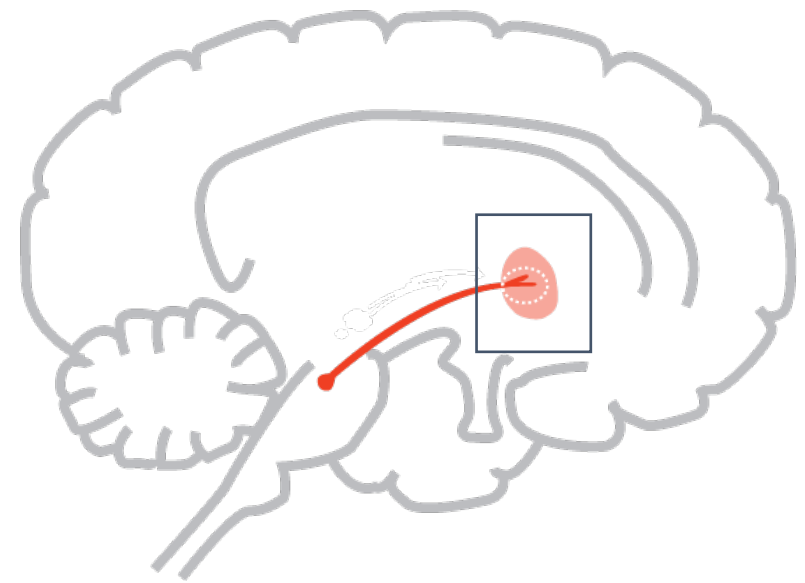
# Too Little Dopamine, or Too Much?



## Mesocortical Hypoactivity



## Mesolimbic Hyperactivity



Cognitive symptoms

Negative symptoms

Affective symptoms

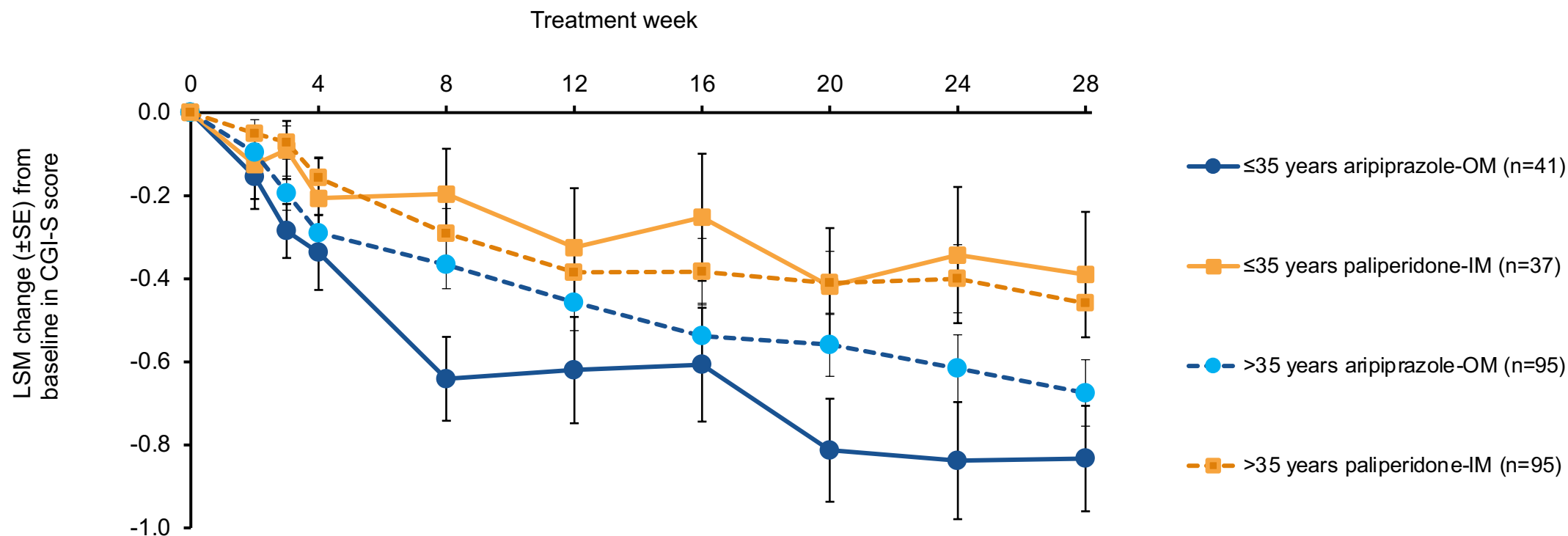
Onset of positive symptoms

# Dopamine Antagonist vs Partial Agonist



- D2 antagonism
  - Haloperidol > Risperidone > Paliperidone > Olanzapine
  - Sometimes needed for severe psychosis or agitation
- Partial Agonism
  - Less prolactin
  - Less EPS-except akathisia
  - Potentially better for negative symptoms, mood and cognition

# LAI Aripiprazole vs LAI Paliperidone CGI-S Scores in Patients $\leq 35$ years



\* $p < 0.05$ , \*\* $p < 0.01$  vs paliperidone-IM; LSM changes from baseline are based on MMRM; CGI-S=Clinical Global Improvement – Severity; IM=intramuscular; LSM=least squares mean; MMRM=mixed-model repeated measures; OM=once-monthly; SE=standard error

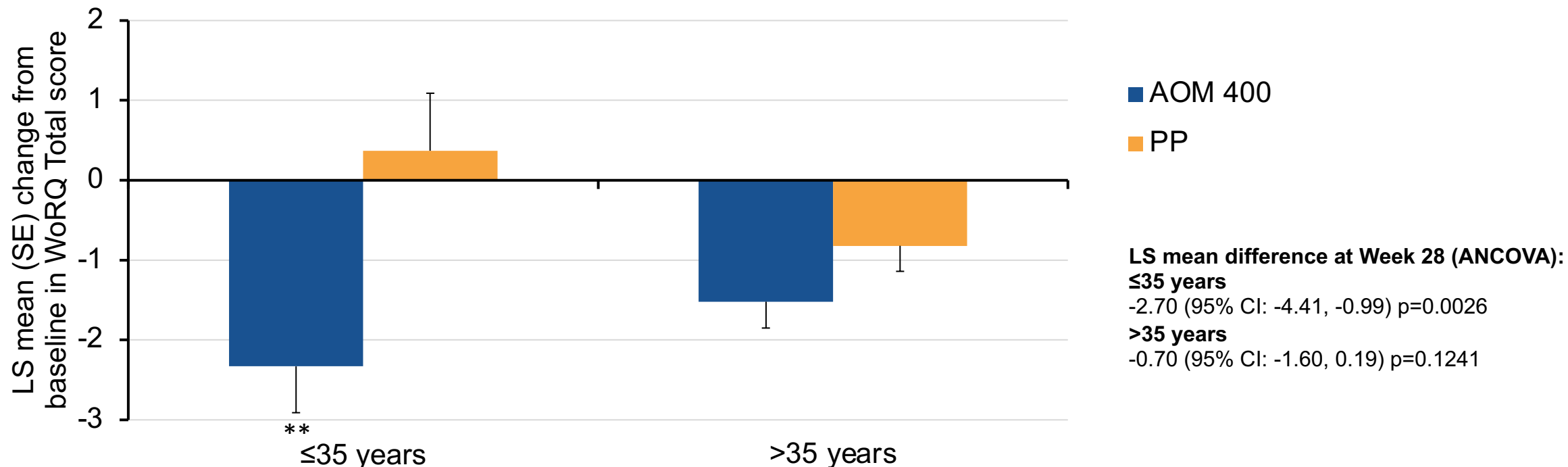
**QUALIFY: 28-week, randomised, non-inferiority, open-label, rater-blinded (with respect to Heinrichs–Carpenter Quality of Life Scale (QLS) and Investigator-Assessed Questionnaire [IAQ]), head-to-head study of aripiprazole 400 mg once-monthly and paliperidone palmitate once-monthly in adult patients (18–60 years). The primary endpoint assessed non-inferiority and superiority on QLS total score analysed using mixed model for repeated measurements. The dose of paliperidone palmitate once-monthly was 50–150 mg/month in the EU and Canada or 78–234 mg/month in the USA.**

**The minimal clinically important difference of the Heinrichs–Carpenter QLS was determined to be 5.3 points**

# Work Productivity



Change from baseline to Week 28 in WoRQ Total score



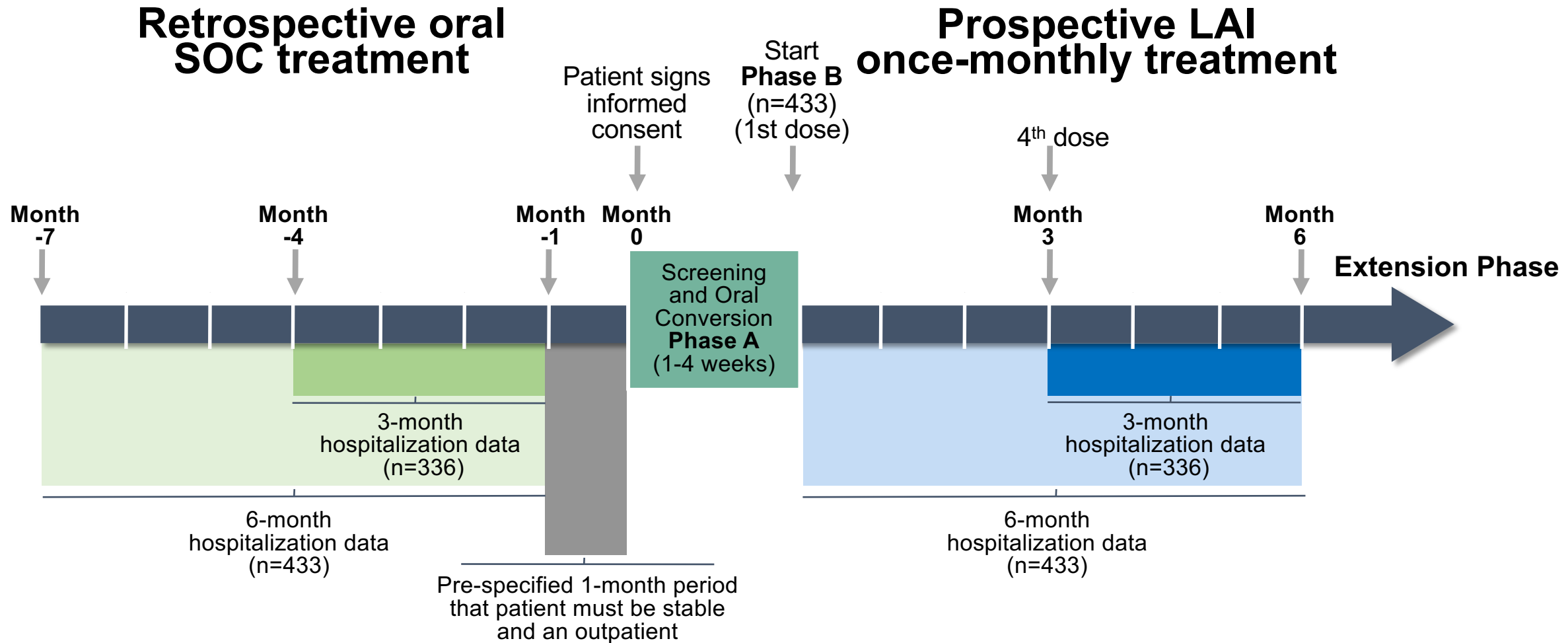
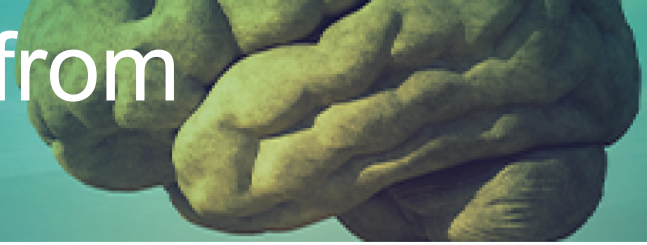
\*\*p<0.01 versus PP; FAS; mean baseline WoRQ Total score (FAS): ≤35 years AOM 400 (n=32) 14.4, PP (n=22) 15.1, >35 years AOM 400 (n=78) 14.5, PP (n=76) 14.9  
AOM 400=aripiprazole once-monthly 400 mg; CI=confidence interval; FAS=full analysis set; LS=least squares;  
PP=paliperidone palmitate; SE=standard error; WoRQ=Readiness for Work Questionnaire

Lundbeck H. *Integrated Clinical Study Report. A 28-week, randomised, open-label study evaluating the effectiveness of aripiprazole once-monthly versus paliperidone palmitate in adult patients with schizophrenia. Study 14724A. 20 April 2015.*

# Anne

- 30 year old married mother of two with **first break at age 27**
- Wakes in the **morning hearing voices** while trying to get her kids off to school
- **Gets very ill when she misses her meds**
- **Feels “flat and tired”**
- Her husband states **”I love my wife but is she safe to be with the kids?”** .....“What would you do if this was your wife?”

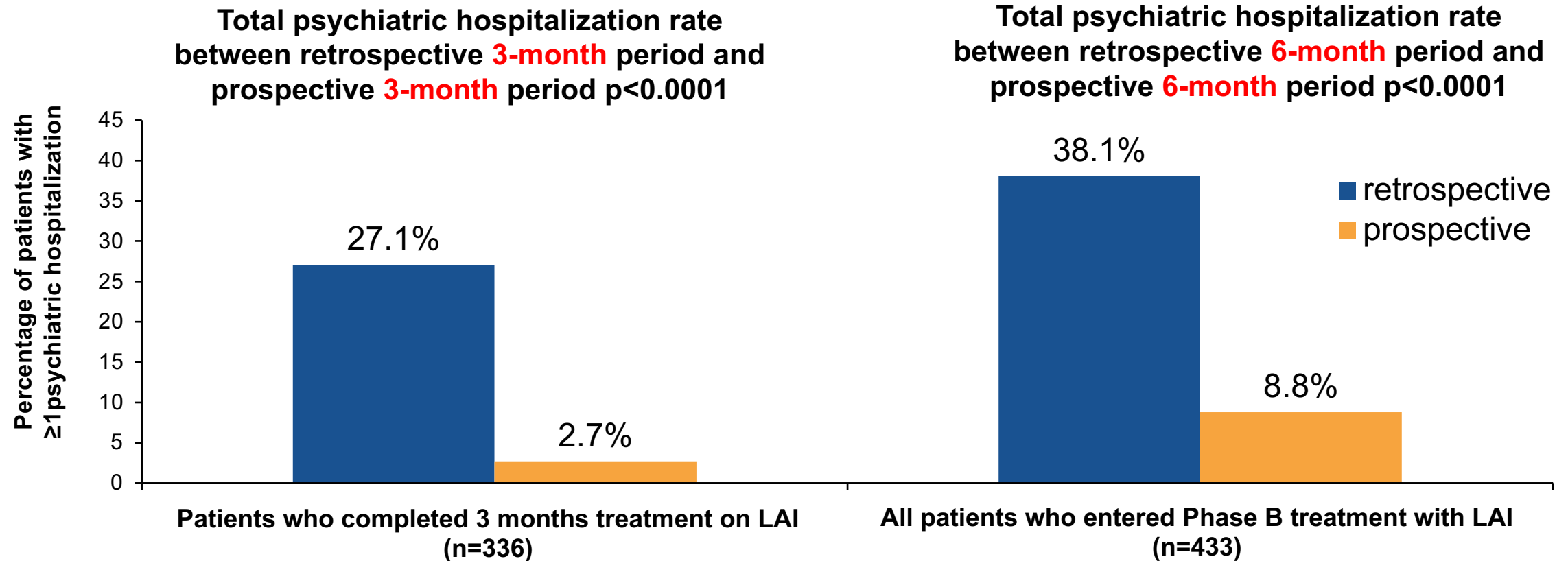
# Hospitalization Rates in Patients Switched from Oral Antipsychotics to LAI, "Mirror Study"



SOC: standard-of-care.

Kane JM, et al. J Med Econ. 2014;18(2):145-154.

# Psychiatric Hospitalizations Rates Before and After LAI



# Not Just Hospitalizations.....

## Other Crisis Utilization



	Retrospective months -4 to -1 ( <i>n</i> = 336)	Prospective months 4-6 ( <i>n</i> = 336)
<b>Inpatient psychiatric hospitalizations</b>		
Total number of events/patients with event	104/91	10/9
Mean cumulative duration (range), days	11.1 (2-57)	7.0 (2-16)
<b>Inpatient hospitalizations for psychosocial reasons</b>		
Total number of events/patients with event	7/7	0/0
Mean number of events per patient (range)	1.0 (1-1)	-
Mean cumulative duration (range), days	15.6 (4-31)	-
<b>Psychiatric partial hospitalizations</b>		
Total number of events/patients with event	2/2	0/0
Mean number of events per patient (range)	1 (1-1)	-
Mean cumulative duration (range), days	5.9 (0.4-11.4)	-
<b>Psychiatric intensive outpatient programs</b>		
Total number of events/patients with event	4/4	0/0
Mean number of events per patient (range)	1 (1-1)	-
<b>Psychiatric ER visits</b>		
Total number of events/patients with event	34/23	4/4
Mean number of events per patient (range)	1.5 (1-5)	1 (1-1)

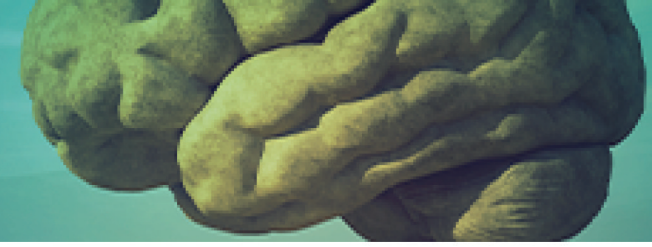
ER, emergency room; *n*, number of patients.

# What Does an ER Visit Mean In the Life of a Patient?



# Case Study: Aaron

- 23 year old
- Presents with family for hallucinations, mood swings, temper problems and inability to hold a job
- Two hospitalizations and one arrest for “psychotic manic” episodes
- Stops and starts his medications
- “I get crazy without the medicine but after a while I forget”
- How would you offer an LAI?



# Mirror Study Baseline Characteristics

Parameters	Total n=130	London only n=96	Wales only n=34
<b>Age (years)</b>			
Mean, SD	42.1, 13.6	40.4, 12.5	46.9, 15.5
Min, max	19, 82	19, 73	19, 82
<b>Duration of illness (years)</b>			
Mean, SD	11.2, 10.0	9.1, 7.0	16.9, 14.3
Min, Max	0, 49	0, 34	0, 49
	n (%)	n (%)	n (%)
<b>Gender</b>			
Male	51 (39)	39(41)	12 (35)
Female	79 (61)	57 (59)	22 (65)
<b>Ethnicity</b>			
White	63 (48)	29 (30)	34 (100)
Black	53 (41)	53 (55)	0 (0)
Other	14 (11)	14 (15)	0 (0)
<b>Diagnosis</b>			
Schizophrenia	67 (52)	51 (53)	16 (47)
Other psychosis	25 (19)	18 (19)	7 (21)
Schizoaffective disorders	22 (17)	17 (18)	5 (15)
Bipolar affective disorder	13 (10)	9 (9)	4 (12)
Other	3 (2)	1 (1)	2 (6)
<b>Care setting at initiation</b>			
Inpatient	79 (61)	66 (69)	13 (38)
Outpatient	51 (39)	30 (31)	21 (62)
<b>Considered treatment responsive<sup>a</sup></b>			
Yes	104 (80)	75 (78)	29 (85)
No	26 (20)	21 (22)	5 (15)
<b>Drug switched from</b>			
Oral atypical	91 (70)	66 (69)	25 (74)
Depot atypical	14 (11)	9 (9)	5 (15)
Depot typical	14 (11)	12 (13)	2 (6)
Clozapine	2 (1)	2 (2)	0 (0)
Antipsychotic polypharmacy	3 (2)	2 (2)	1 (3)
IM atypical (regular)	2 (2)	1 (1)	1 (3)
None	4 (3)	4 (4)	0 (0)

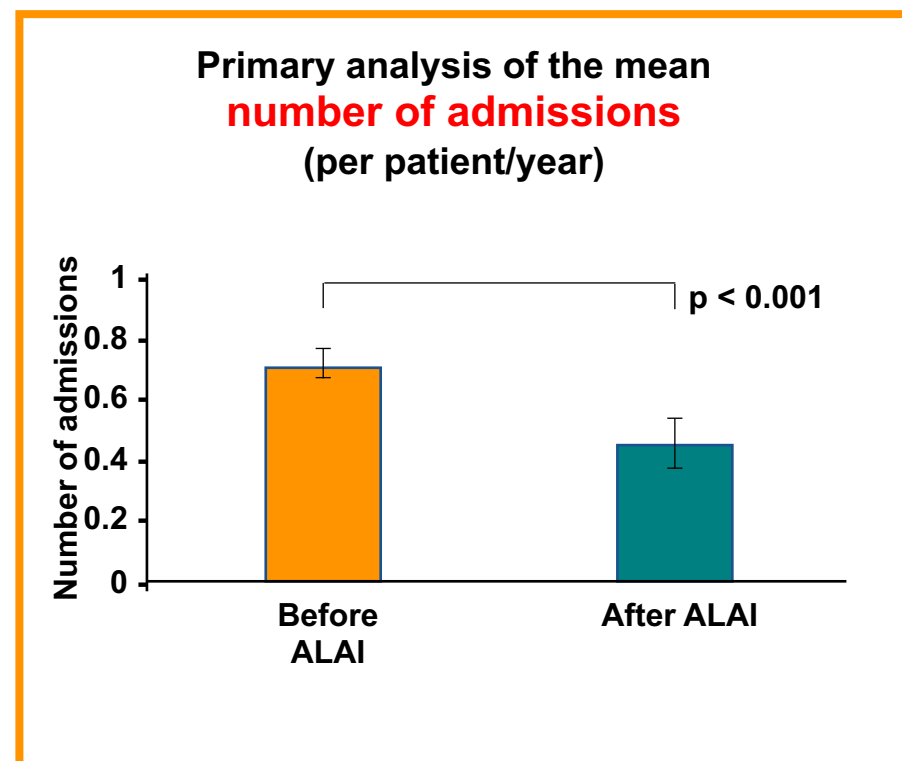
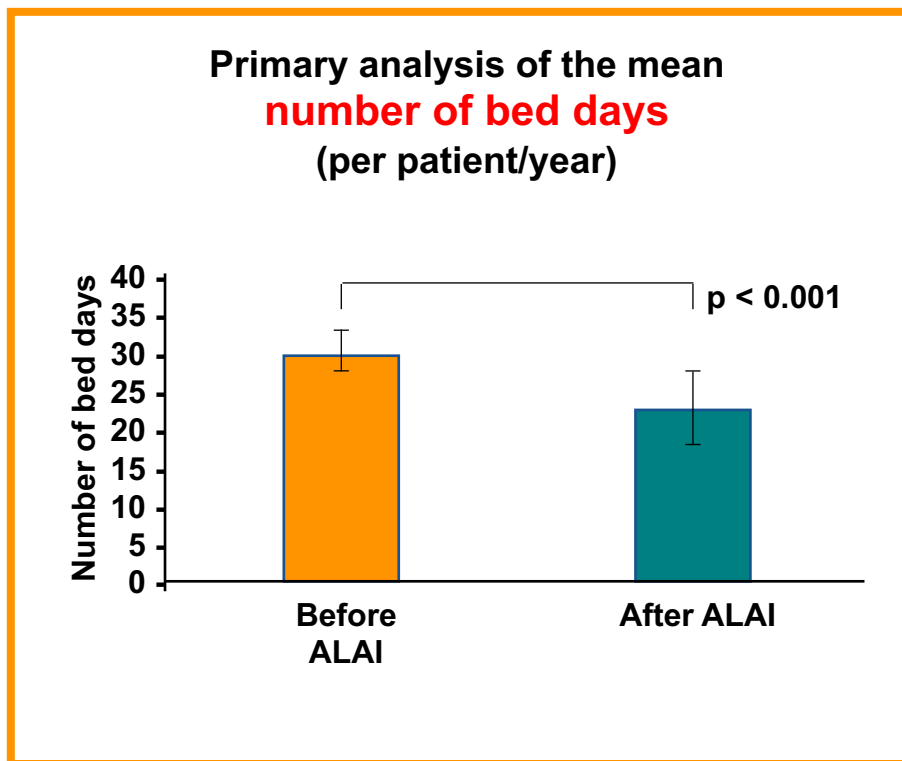
SD = standard deviation.

Defined as no previous use of clozapine or previous considerations of clozapine.

Adapted from:

Taylor DM, et al. *J Psychopharmacology*  
2017 Dec;31(12):1564-1569.

# Primary Analysis of the Mean Number of Bed Days and Admissions

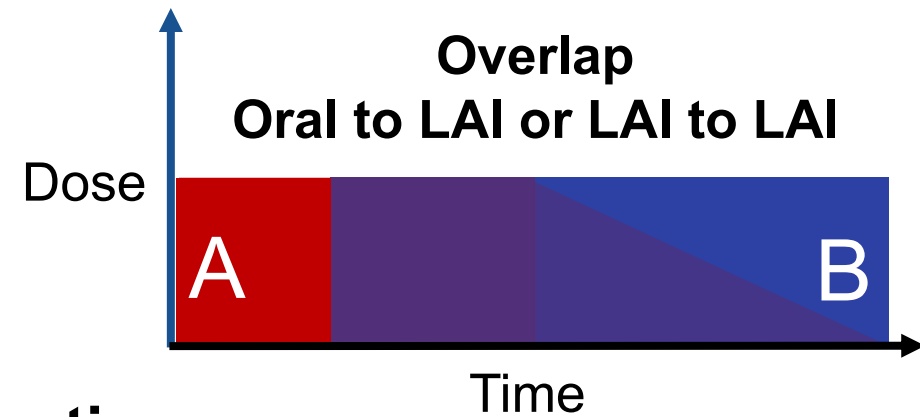
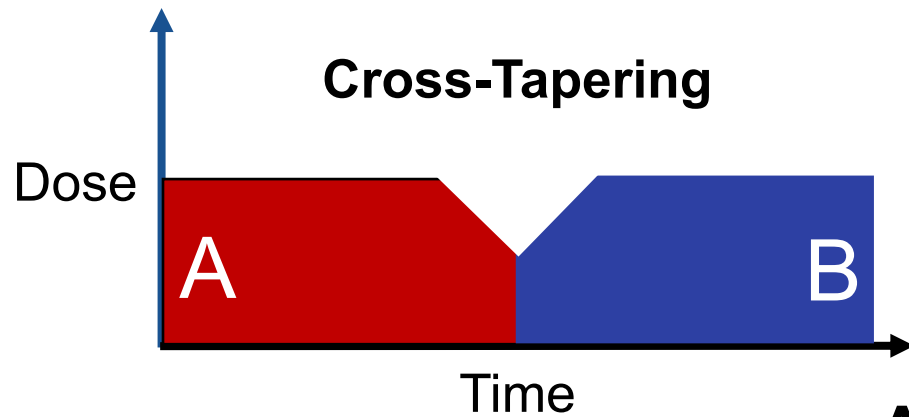
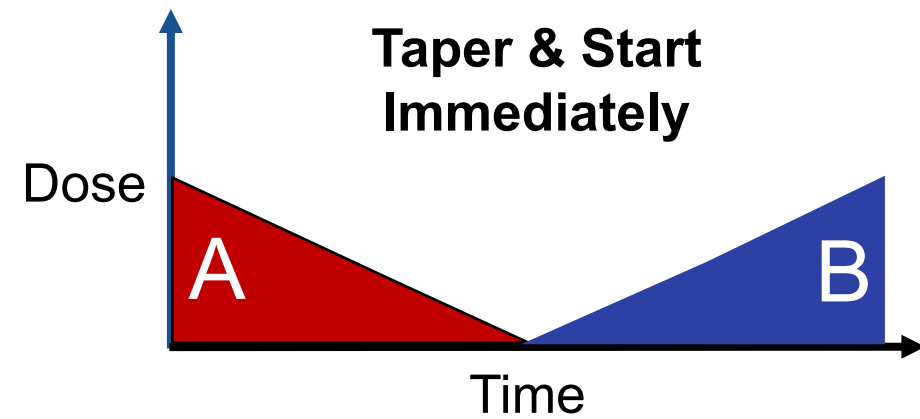
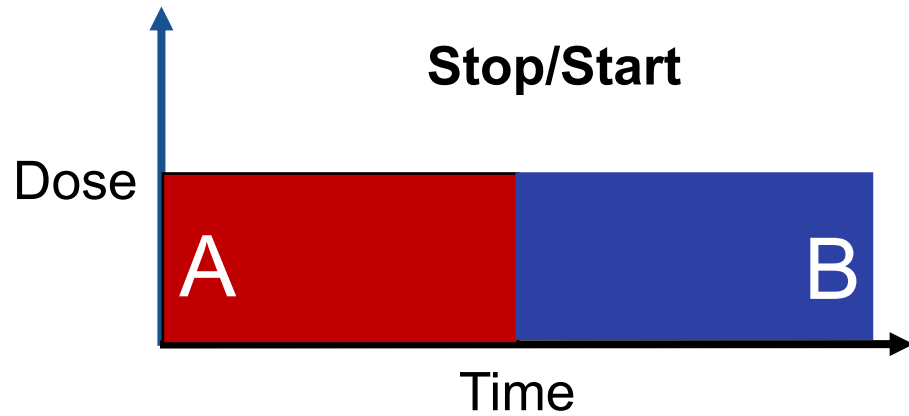


Bars represent standard error.

ALAI = aripiprazole long acting injection.

Adapted from: Taylor DM, et al. *J Psychopharmacology*. 2017.

# How Do You Switch LAIs?



**A- Old Medication**  
**B- New Medication**

# LAI Options in the United States

A human brain is shown in the top right corner, rendered in a greenish-yellow color. In the background, a person is standing in a field under a blue sky.

## First-generation antipsychotics (all are in sesame seed oil)

- **Haloperidol** decanoate, usually once monthly
- **Fluphenazine** decanoate, usually every 2 weeks

## Second-generation antipsychotics (all IM formulations are water-based)

- **Risperidone LAIs**
  - Risperidone microspheres every 2 weeks
  - Risperidone subcutaneous LAI once monthly
- **Paliperidone LAIs**
  - Paliperidone palmitate monthly
  - Paliperidone palmitate every 3 months
  - Paliperidone palmitate every 6 months
- **Aripiprazole LAIs**
  - Aripiprazole monohydrate once monthly
  - Aripiprazole lauroxil once monthly, every 6 weeks, or every 2 months
- **Olanzapine** pamoate every 2 weeks or once monthly

# LAI Options in the United States

A human brain is shown in the top right corner, rendered in a greenish-yellow color. In the background, a person is standing in a landscape, looking towards the horizon.

First-generation antipsychotics (all are in sesame seed oil)

- **Haloperidol** decanoate, usually once monthly
- **Fluphenazine** decanoate, usually every 2 weeks
- Both with high D2 receptor antagonism
- “Z track” for injection
- High rates of prolactin elevation and EPS
- Fairly low weight gain
- Not ideal for Negative Symptoms but sometimes needed for Severe Psychosis

# LAI Options in the United States

## Second-generation antipsychotics

- **Risperidone LAIs**

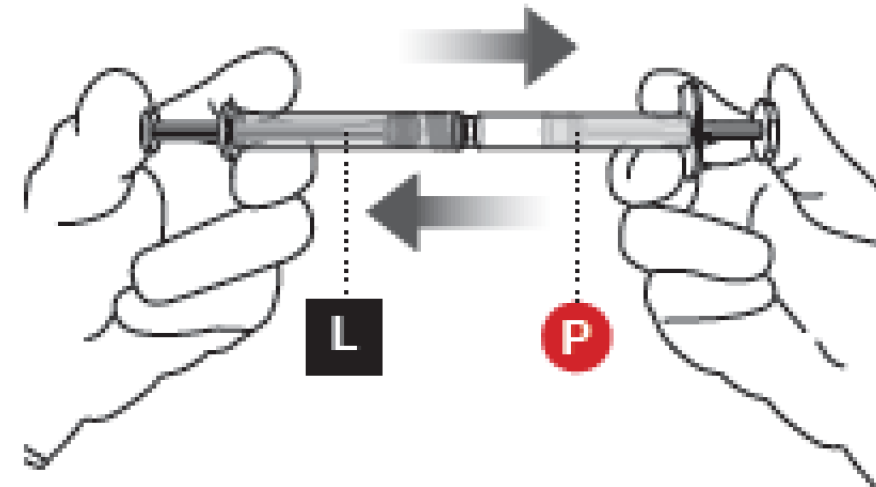
- Risperidone microspheres every 2 weeks-**Consta**
  - **Approved for Schizophrenia and Bipolar Disorder**
- Risperidone subcutaneous LAI once monthly- **Perseris**

**Consta - 12.5 – 50 mg **Im** q 2 weeks**

- **Requires 3 weeks oral**

**Perseris – 90 or 120 mg **Sq** q month**

- **No oral dose needed**
- **60 “cycles” mixing**



# LAI Options in the United States

## Second-generation antipsychotics

- **Paliperidone LAIs**
  - Paliperidone palmitate monthly
  - Paliperidone palmitate every 3 months – *Trinza*
    - ***Must have 4 months on paliperidone monthly***

If the Last Dose of INVEGA SUSTENNA® is:	Initiate INVEGA TRINZA® at the Following Dose:
78 mg	273 mg
117 mg	410 mg
156 mg	546 mg
234 mg	819 mg

# LAI Options in the United States

## Second-generation antipsychotics

- **Paliperidone LAIs**
  - Paliperidone palmitate monthly
  - Paliperidone palmitate every 3 months – *Trinza*
  - Paliperidone palmitate every 6 months- *Hafyera*
    - ***4 months of paliperidone monthly or 1 dose of Trinza***

If the Last Dose of PP1M is:	Initiate INVEGA HAFYERA at the Following Dose:
156 mg	1,092 mg
234 mg	1,560 mg

# LAI Options in the United States

A human brain is shown in the top right corner, rendered in a greenish-yellow color. In the background, a person is standing in a landscape under a blue sky.

## Second-generation antipsychotics

- **Aripiprazole LAIs**
  - Aripiprazole monohydrate once monthly-**Maintena**
    - Approved for Schizophrenia and Bipolar Disorder
    - 400 mg dose
    - Requires 2 weeks oral supplementation
    - Can be given in deltoid or gluteal region
    - 2 month version in development

# LAI Options in the United States

A human brain is shown in the top right corner, rendered in a greenish-yellow color. In the background, a person is standing in a landscape under a blue sky.

## Second-generation antipsychotics

- **Aripiprazole LAIs**
- **Aripiprazole lauroxil- *Aristada*** once monthly, every 6 weeks, or every 2 months
  - 441 mg monthly in shoulder or gluteal
  - 662 mg q4 or 6 weeks gluteal
  - 882 mg and q 4 or 8 weeks gluteal
    - **882 monthly achieves twice the blood level of the 441 mg dose**
  - 1064 mg dose q 8 weeks
- ***Initio*** – a smaller crystal which dissolves more rapidly
  - 675 mg in deltoid
  - given with 30 mg oral aripiprazole
  - can be used with any *Aristada* dose

# LAI in the Pipeline



## Risperidone formulations

- Risperidone subcutaneous LAI, every 1 or 2 months (Teva)
- Risperidone intramuscular LAI once monthly (Rovi)

## Aripiprazole formulations

- Aripiprazole monohydrate every 2 months (Otsuka/Lundbeck)

# LAI in the Pipeline

## Risperidone LAI in development

- ***Risperidone subcutaneous, every 1 or 2 months (Teva)***
  - Doses of 50-125 mg SQ monthly or
  - 100- 250 mg SQ per 2 months
  - Small needle
  - No loading dose required

Frequency of TV-46000 administration	Oral risperidone doses and corresponding TV-46000 doses			
	2 mg/day	3 mg/day	4 mg/day	5 mg/day <sup>b</sup>
TV-46000 q1m	50 mg	75 mg	100 mg	125 mg
TV-46000 q2m	100 mg	150 mg	200 mg	250 mg

# LAI in the Pipeline

## Risperidone LAI in development

- ***Risperidone subcutaneous, every 1 or 2 months (Teva)***
  - Doses of 50-125 mg Sq monthly or
  - 100- 250 mg Sq per 2 months
  - No loading dose required and a “small needle”
  - Among HCPs

**90%**

Feel it's beneficial to not require a loading dose during initiation of schizophrenia treatment

**84%**

Choice of monthly vs every-other-month injections

**61%**

Only need one injection to initiate therapy

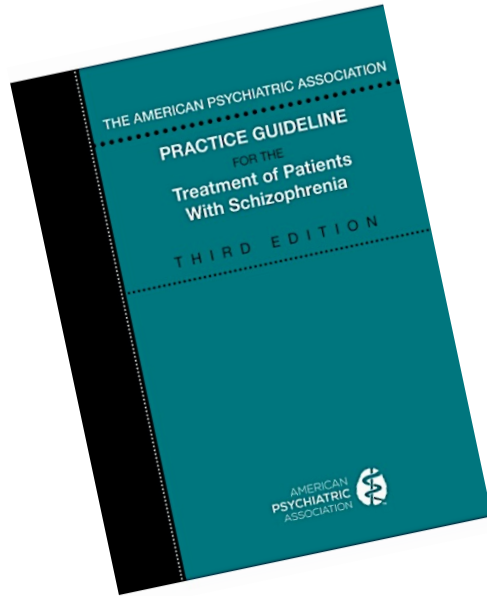
**59%**

It's an injection rather than an oral tablet

# LAI Administration



# New Guidance and Updated LAI Therapy Guidelines



## ***APA Practice Guidelines for the Treatment of Patients with Schizophrenia***

- APA suggests that patients receive treatment with a long-acting injectable antipsychotic medication if they prefer such treatment or if they have a history of poor or uncertain adherence.
- Patients can only express preference if educated on options.
- LAIs are options at any stage in a patient's treatment.

# Boosting Confidence in Performing Injections

Watch an instructional video.



Observe an experienced colleague.



Practice using training model.



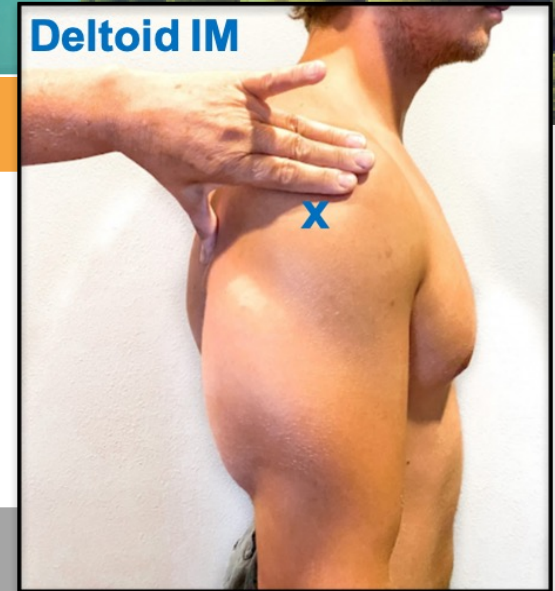
Make conversation with the patient.



# Administering the Injection

## Deltoid Injections

- 2-3 fingerbreadths below the acromial process
- Stretch skin tight
- Insert needle at 90° angle with quick firm motion
- Dispense solution then remove needle



## Gluteal Injections

- Find trochanter (top of femur) and place palm of hand there
- Point index finger toward iliac crest
- Spread index finger and middle finger, making a V
- Injection should be given between knuckles of index finger and middle finger
- Stretch skin tight
- Insert needle at 90° angle with quick firm motion
- Dispense solution then remove needle



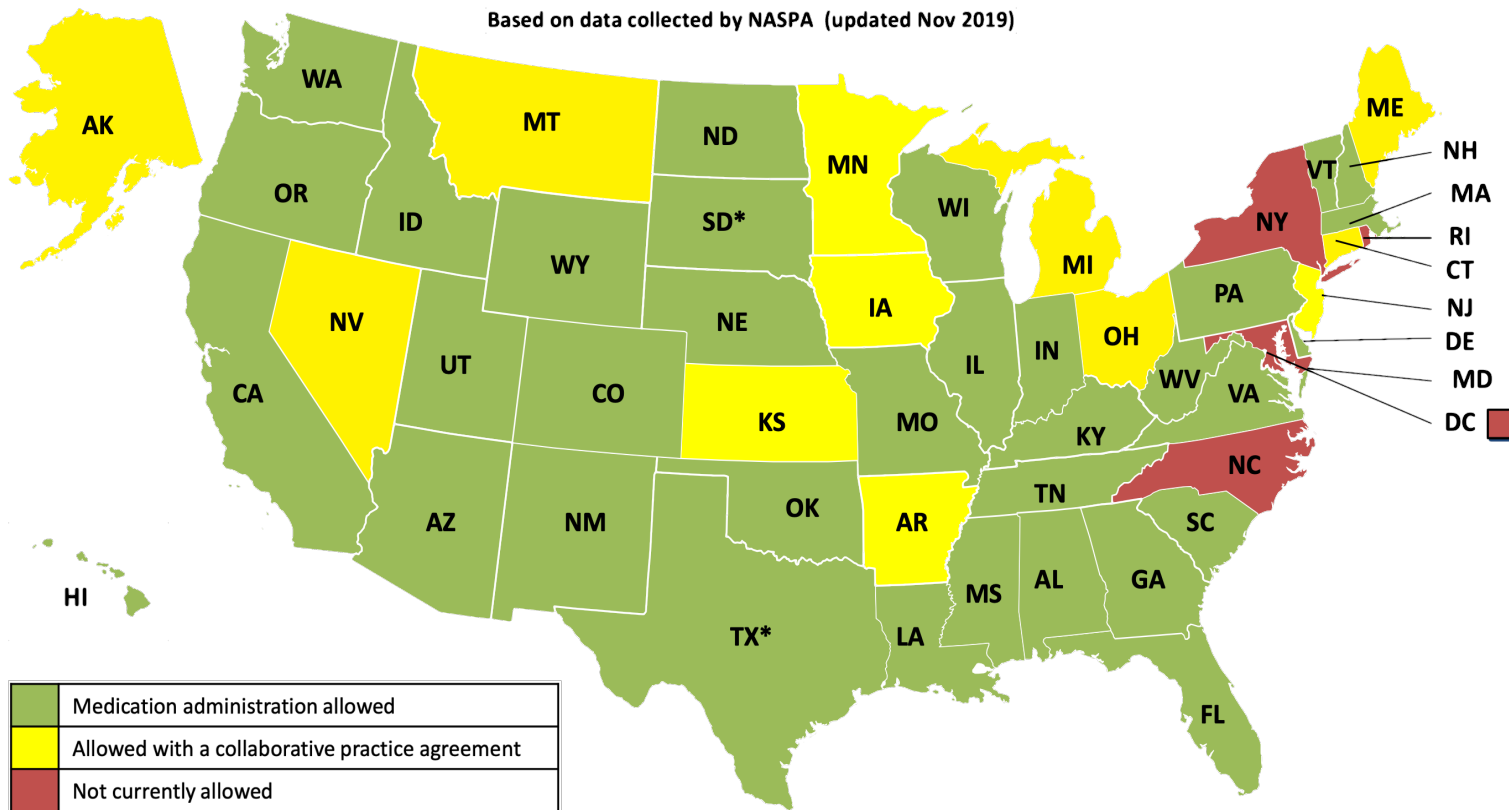
# Administering the Injection

## Subcutaneous Injections

- Have patient positioned supine
- Find adequate subcutaneous abdominal tissue
- Pinch enough skin to accommodate needle size
- Insert needle at 45° angle
- Inject medication slow and steady
- Remove needle from same angle as insertion
- Release the skin



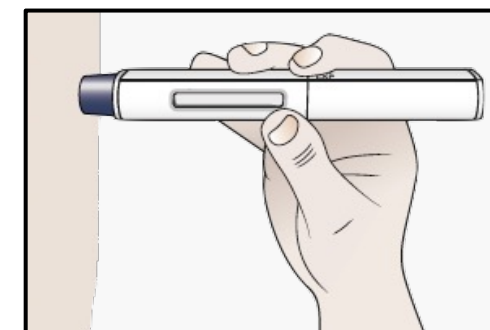
# Utilizing LAIs as a Non-Injector



## Pharmacist authority to administer LAIs



Partnering with PCPs



Maybe one day?

PCP = primary care provider.

National Alliance of State Pharmacy Associations (NASPA) [www.naspa.us]. Last updated 2017. Accessed February 5, 2022.

<https://naspa.us/wp-content/uploads/2017/07/Pharmacists-Authority-to-Administer-Medications.pdf>. Keepers GA, et al. *Am J Psychiatry*. 2020;177(9):868-72.

# Patient Attitudes about Long-Acting Injectable Antipsychotics



Survey in France: Patients (N=206) with schizophrenia with  $\geq 3$  months treatment with an LAI antipsychotic, injections were the favored dosage form

67% said they felt better having received an injectable treatment than they felt before

51% considered injectable therapy to be more effective than other medication

**70% felt better supported** in their illness by virtue of regular contact with the doctor or nurse who administered their injection

# Check-in with Lauren

*Successful Strategies for Patient-Clinician Communication*



# Missed Connections?

75% of psychiatrists in one study reported routinely informing their patients about LAIs



...but only 33% of LAI-naïve patients felt educated



A study analyzing the language psychiatrists used to discuss LAIs revealed:

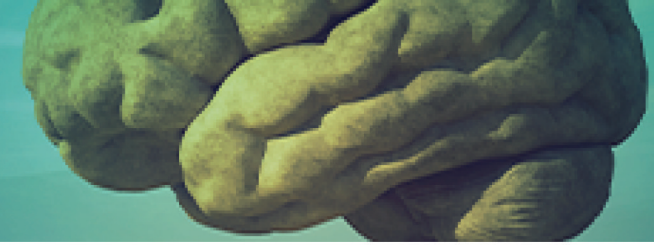
91% emphasized the fact that it was a "shot" or "injection"; only 9% emphasized clinical benefits

**33%**  
Accepted

**96%**  
Would have

**What would you think about a medicine you would just take once a month?**

# So...



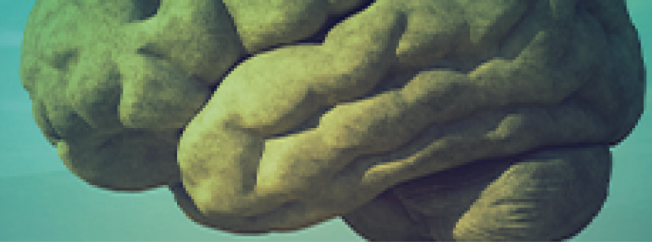
## **Old view of LAI patient**

- Multi-episode
- Poor compliance
- Disorganised
- Poorly engaged
- In trouble
- Punished

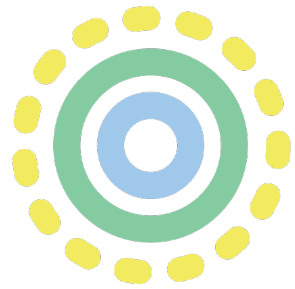
## **New view of LAI patient**

- ✓ Earlier in treatment
- ✓ Ease of use
- ✓ Symptom improvement
- ✓ Relapse prevention
- ✓ Functional Improvement
- ✓ Quality of life

# Around the Globe – It Takes a Team!



# RESOURCE CENTER SLIDE PLACEHOLDER



**long-acting injectables**360

# Questions?

Scan the QR code to participate!

