



# Cognitive Adaptation Training

## Adaptive Aids for the Brain



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*Presented by*

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# Texas Money Follows the Person Demonstration

- Texas' MFP established in 2001 as a response to the Olmstead decision. Texas' federal demonstration began in 2008.
- Supports individual choice to receive long-term services and supports in the community, not the NF... without being placed on a waiting list.
- Texas leads the nation in the number of individuals relocated under MFP.
- Over 27,000 have left nursing facilities into the community under the state program and federal demonstration.

# MI in Nursing Facilities

- Nationally, over 100,000 nursing facility residents have a primary diagnosis of mental illness, with a disproportionate number (almost 25,000) being under the age of 65.
- A 2007 data analysis in Texas nursing facilities residents showed over 7,000 people were former mental health or substance abuse clients, and in San Antonio, over 640 nursing facility residents were former clients.
- Because of the limitations of the public mental health system in Texas, this data represents a subset of all people with significant behavioral health disorders.

- Bagchi, A.D., Simon, S.E. & Verdier, J.M. (2009). How many nursing home residents live with a mental illness? *Psychiatric Services*, 60(7), 958-964.
- Texas Department of State Health Services and Texas Department of Aging and Disability Services (2007). Data match showing prevalence of former DSHS clients in DADS licensed nursing facilities.

# Behavioral Health Pilot (BH Pilot)

- One piece of the MFP Demonstration. Focuses on transitioning adults who have mental illness and/or substance abuse diagnoses in San Antonio and Austin.
- Demonstrates the value / impact of providing behavioral health services to individuals leaving nursing facilities.
- The BH Pilot adds two additional services to MFP: Cognitive Adaptation Training and Substance Abuse Services.

# BH Pilot Services—Community Based

- 365 Days of Substance Abuse Services
  - Community based individual substance abuse counseling
  - Group substance abuse services
  - Linkage to other community based services (Narcotics Anonymous, Alcoholics Anonymous, etc)
  - Peer-Support Specialist
- 365 Days of Cognitive Adaptation Training (CAT)
  - Empowerment based intervention that helps participants master skills of independent living
  - Adapt the persons physical environment to compensate for disabilities and improve functioning.

# BH Pilot Services—Pre-transition Services

## —6 months of Pre-Discharge Services

- Substance abuse and/or CAT services provided to participant while s/he is still in the nursing facility.
- Begin development of therapeutic relationship before the participant relocates.
- CAT services help with the decision making process of choosing the community residence and tasks necessary to accomplish relocation (housing voucher paperwork, physically visiting potential residences)
- Substance abuse counselor works with participant to identify triggers in the community for drug or alcohol abuse.

# Eligibility

- Must be Medicaid eligible and choose to enroll in the BH Pilot.
- Must discharge directly from a nursing facility and have been in an institution for 3 months or more
- Diagnosis of severe mental illness or another mental illness and GAF score < 50
- Wishes to relocate into the community and be able to benefit from pilot services.

# Cross-Agency Collaboration

- **DADS**—Runs overall MFP Demonstration.
  - **STAR+PLUS Support Unit**—Meets with participant after s/he requests community services; enrolls participant in HMO, contacts relocation contractor.
  - **Relocation Contractors**—Responsible for obtaining and securing community housing for participants.
- **HHSC**—Single state agency that administers the Texas Medicaid Program
  - **Health Maintenance Organizations** (Molina, Superior, AMERIGROUP, Evercare)—Provide Medicaid managed care services for participants.
- **Department of State Health Services**—BH Pilot project management and oversight.
  - **Center for Healthcare Services**—Local Mental Health Authority in San Antonio. Provides pilot interventions in San Antonio.
  - **UT Health Science Center**—Training and technical oversight for CAT intervention. Also provides CAT Services in Austin.
  - **Travis County Integral Care**—Mental Health Authority in Austin. Provides substance abuse interventions in Austin.



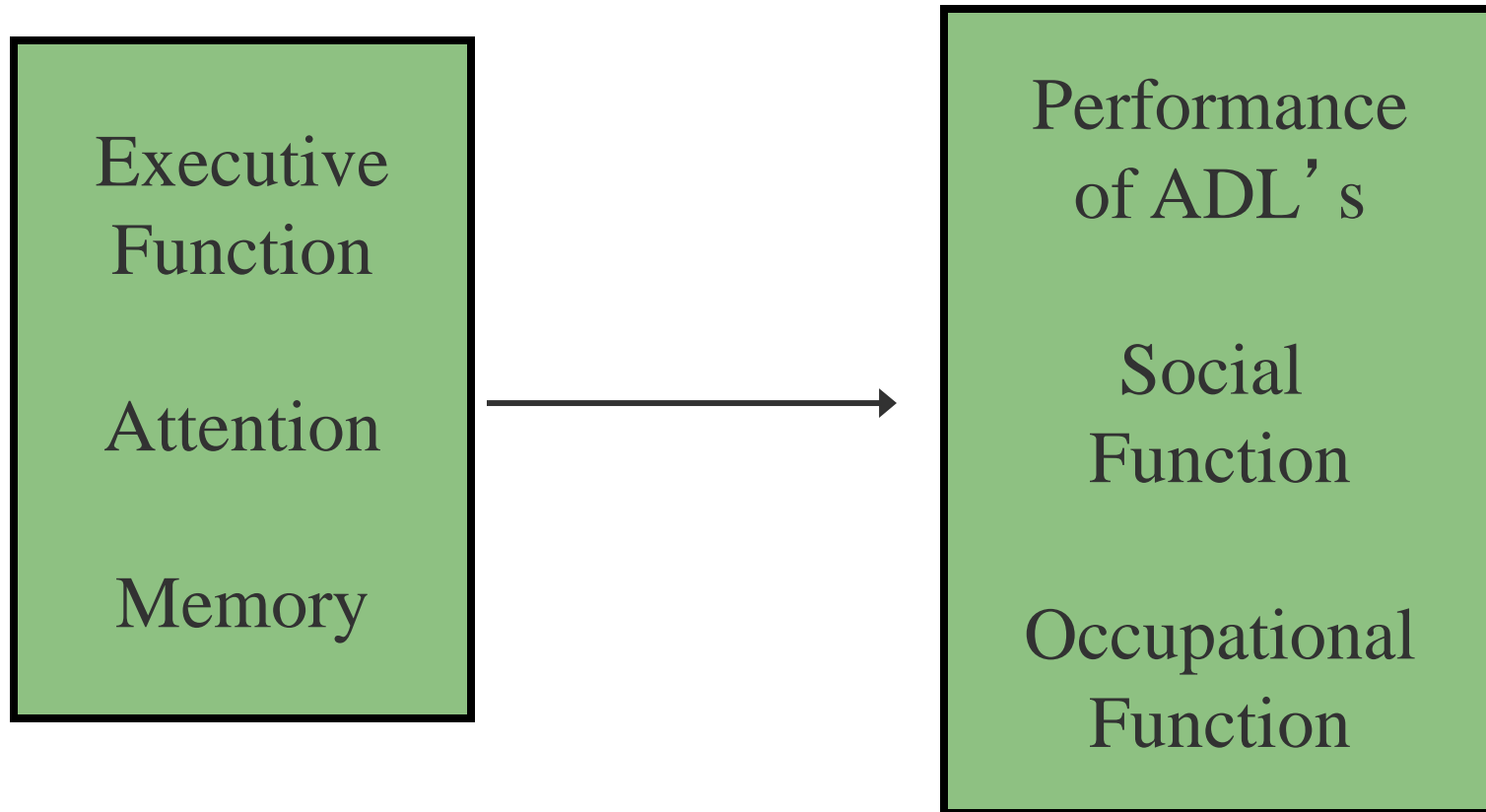
# Findings

- To date, 88% of individuals have successfully maintained independence in the community.
- Participants demonstrate statistically significant improvement on standardized scales (Multnomah Community Ability Scales) which measure ability to survive in the community, independence in daily life, money management and coping skills.
- Preliminary analysis indicates that Medicaid costs for participants in the Pilot may be lower on average than costs prior to their discharge from the NF.
- Examples of increased independence include getting a paid job at competitive wages, driving to work, volunteering, getting a GED, attending computer classes and working toward a college degree.

# Cognitive Adaptation Training

Why and How?

# Cognitive Deficits Predict Functional Outcomes

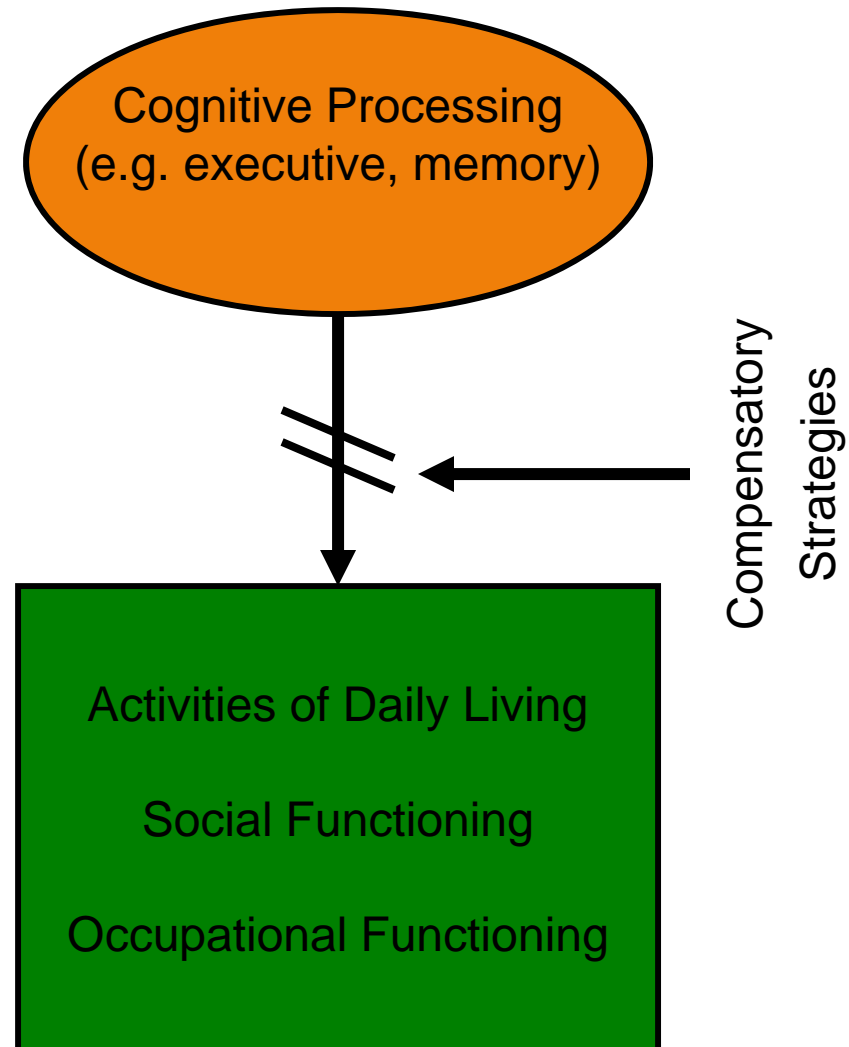


Green MF. Am J Psychiatry, 1996; 153: 321-330

Velligan et al., Schiz Res, 1997; 25: 21-31

# Compensatory Strategies

- Compensatory strategies rely on environmental supports to bypass cognitive shortcomings and subsequently improve functional outcomes
- CAT – Cognitive Adaptation Training (exs: PDA, post it notes)



# Types of Compensatory Strategies

- Cognitive Adaptation Training – is an in-home intervention to overcome limitations of mental illness with using everyday items/adaptive aids such as alarms, checklists and the organization of belongings.

VS.

- Cognitive Remediation – goal is to bolster specific cognitive capacities that are weak. This treatment is not typically delivered in the home, but rather is performed in a group setting within a computer lab.

CAT is based upon level of executive functioning and overt behavior

Apathy	Prompting and cueing to complete each step in a sequenced task
Disinhibition	Removal of distracting stimuli and cues for inappropriate behavior
Mixed	Both prompting of steps and removal of distracting stimuli
Fair Functioning	Cues can be more subtle cues, less proximal
Poor Functioning	Cues must be larger, more proximal, more numerous

General interventions are then adapted for strengths or weaknesses in specific areas of functioning (e.g. attention, memory)

# CAT Assessments

1. Frontal Lobe Personality Scale
2. Thorough Environmental Assessment with the home

## KITCHEN:

*Who is responsible for the following jobs?*

	Participant	Spouse or Relative	Other
Washing Dishes			
Cleaning Counters/floors			
Cooking Food			
Shopping			

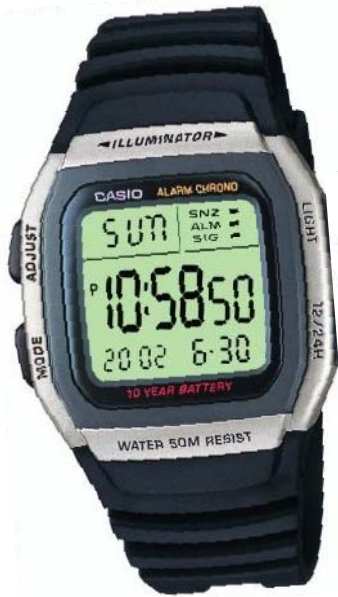
- a) How often do you [complete that task]? Explain how you go about doing it. What supplies do you use to complete the job? May I see those supplies?*
- b) Can you explain all the steps in making a sandwich to me?*
- c) Give me an example of a well-balanced meal that you can prepare. Describe how you would prepare it.*
- d) How do you store leftover food? How do you know when it is spoiled?*
- e) Where do you usually eat your meals? Who do you usually eat with?*
- f) When eating, what utensils do you use? Do you regularly use a napkin (show me what you use to wipe your mouth)?*

# CAT Intervention Areas

Bathing	Laundry
Dressing	Grocery Shopping
Dental Hygiene	Transportation
Make-up	Leisure Skills
Work/Vocational Skills	Toileting
Social Skills, Communication and Telephone Use	Housekeeping/Care of Living Environment
Eating, Nutrition and Cooking	Money Management/Budgeting
Medication Management	Orientation



# Basic Interventions/Critical Items



# Choose this, not that



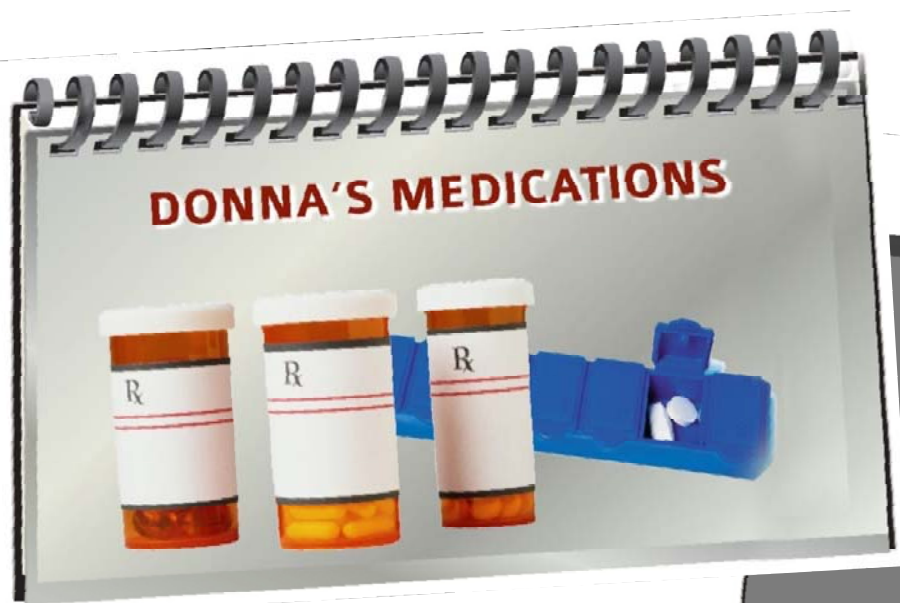
Higher functioning (no alarm) but complicated medication regimen



Couple with appropriate med container for lower functioning individual



Low functioning – alarm and pills together with voice alarm. Uncomplicated medication regimen

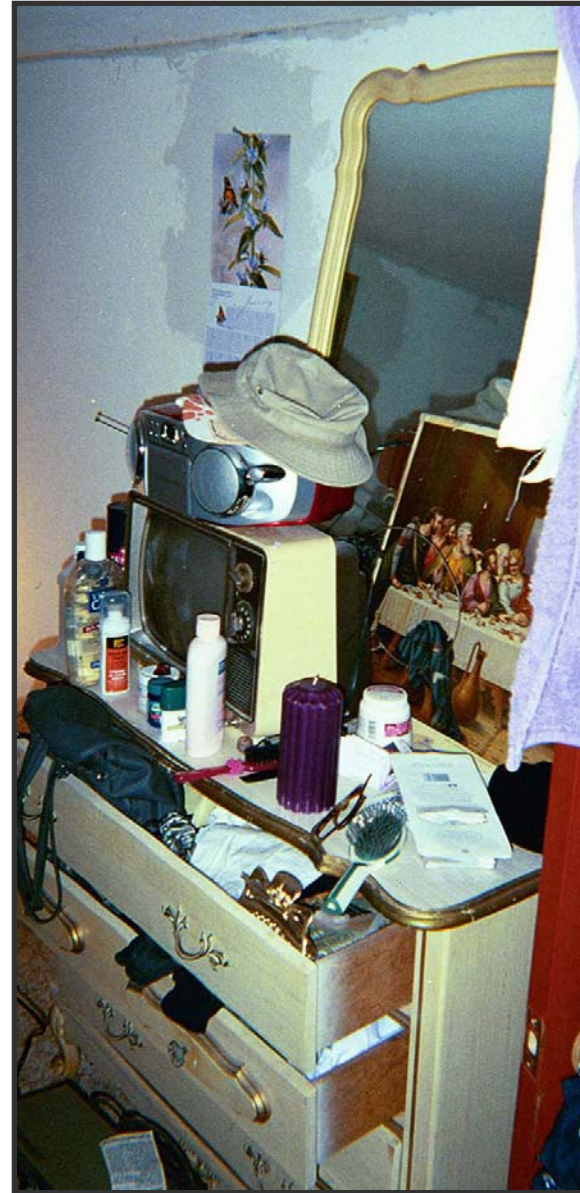


# Medication Interventions





# Prior to intervention— Dresser and Drawers



# Organization of Belongings – Before and After





# Intervention for Dressing



Apathy



Disinhibition

# Intervention for Safety

Before



After



# Daily Activity Log and Instruction Manual

John's Daily Activities for 7/11 - 7/17

Day:	Sunday	Monday	Tuesday	Wednesday
9:00 am				
9:30 am				
10:00 am				
10:30 am				
11:00 am				
11:30 am				
12:00 pm				
12:30 pm				
1:00 pm				
1:30 pm				
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5:00 pm				
5:30 pm				
6:00 pm				
6:30 pm				
7:00 pm				
7:30 pm				
8:00 pm				
8:30 pm				

Notes:





# Checklists for everyday behaviors

Mario's Daily Checklist							
	6/11	6/12	6/13	6/14	6/15	6/16	6/17
	<u>Wednesday</u>	<u>Thursday</u>	<u>Friday</u>	<u>Saturday</u>	<u>Sunday</u>	<u>Monday</u>	<u>Tuesday</u>
Take Morning Meds							
Take Shower							
Use Deoderant							
Use Mouth Wash							
Take PM Meds							
Change Clothes							

# Dental Hygiene



**Brush Teeth  
Everyday**

Apathy,  
Poor Executive  
Function

# Disinhibition--Fair Executive Function



# Use of Crisis Response Form

Barbara was discharged from a 3-day psychiatric hospitalization the day prior to this filming. Within the past three months, she has been to the hospital almost every week.

# Technology in the home

Megan gets an idea during the session for a sign

# Intervention for smoking



# Outcome Assessments

Assessments are completed at the time of relocation and each 3 months:

- The Multnomah Community Ability Scale (MCAS) is a 17-item scale assessing domains of functionality including interference with functioning, adjustment to living, social competence, and behavioral problems (Barker et al., 1994). The MCAS generates a total score and scores for each of the five domains listed above, with higher scores indicating better functioning.
- The Life Skills Profile (LSP) measures aspects of functioning (“life skills”) which affect how successfully people with mental illness live in the community or hospital (Rosen et al.1989). The 5 subscales include self-care, non-turbulence and social contact, communication and responsibility.

# Preliminary Results

Design: 67 persons with a major DSM-IV Axis I Diagnosis and comorbid physical illness(es) were relocated into the community and, at the time of analyses, 44 of those had at least one follow-up rating. Behavioral health diagnoses primarily include depression, dementia, bipolar disorder, schizophrenia, and substance abuse disorders. Age of participants ranged from 27-89, with an average age of 56.7.

In a mixed model analyses of covariance between baseline and follow-up scores, results indicate the total MCAS score increased ( $F=2.7$ ,  $p<.05$ ), indicating better overall community functioning. Significant increases were also seen in two of the MCAS Domains including, interference with functioning ( $F=2.45$ ,  $p<.05$ ) and Adjustment to Living ( $F=9.99$ ,  $p<.0001$ ), while no significant changes were found Within the Social Competence and Behavioral Problems domains.



# Results Cont' d

- Individual MCAS item scores appear in the Table. All individual items improved (several significantly) with the exception of physical health impairment, which is significantly poorer at follow-up.
- On the LSP, no significant changes in either direction were apparent in the total score nor in 5 of the subscales. A significant improvement in communication was found ( $F= 3.44$ ,  $p<.05$ ), indicating better communication skills and adherence to social norms. (future results on QOL; quantity does not=quality)

MCAS Item	F Value	p value
Physical Health	-2.94	0.004
Intellectual Functioning	0.60	0.667
Thought Processes	0.66	0.624
Mood Abnormality	4.37	0.003
Response to Stress and Anxiety	2.11	0.085
Ability to Manage Money	9.08	<.0001
Independence in Daily Life	5.75	0.0003
Acceptance of Illness	2.41	0.054
Social Acceptability	1.27	0.286
Social Interest	1.78	0.139
Social Effectiveness	0.49	0.742
Social Network	1.81	0.132
Meaningful Activity	1.37	0.249
Medication Compliance	14.65	<.0001
Cooperation with Treatment	0.94	0.445
Alcohol and Drug Abuse	0.91	0.461
Impulse Control	0.80	0.525

# Discussion

- CAT was successfully applied to persons with comorbid mental and physical disorders relocating from nursing facilities to independent living environments with good preliminary outcomes indicating better overall community functioning. The majority of persons have successfully remained in the community. However, poorer scores are seen on follow-up physical health outcomes.
- Involvement in social activities did not improve post NF discharge. This is likely due to the variety of social activities/persons available at the NF while these activities/persons must be sought out in independent living.
- The pilot will continue into 2016. If it continues to be successful it will be considered for inclusion in the Texas Medicaid long term services and support system.



## *“Ode to a fragile flower”*

Barbara visited the Yucatan Peninsula many years ago and saw a flower growing all on its own in the midst of nothing else. This flower reminds her of how she “sprung forth” out of the nursing facility to thrive.

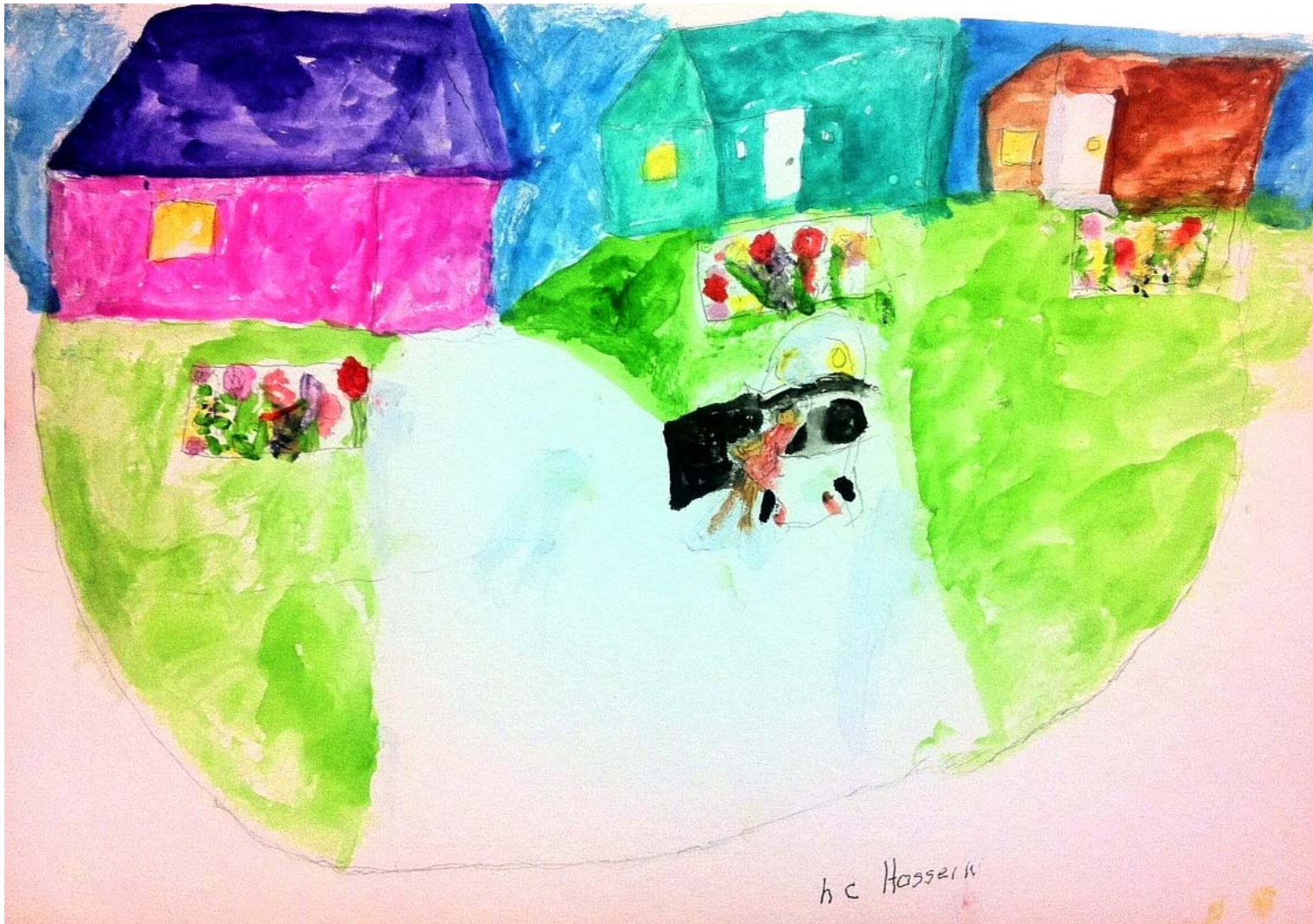


## *“Independence”*

Natalie demonstrates “reaching for the stars” in her depiction of independence. She includes the airplane to reflect that she now feels she can travel throughout Texas, the United States and beyond.







### *Untitled*

Hallie's favorite features in her watercolor of independent living include her sports car and brightly colored homes.

# Questions???

