"its Only a Chocolate chip cookie"

Increasing Access While Decreasing Cost

MULTI-TIERED TREATMENT MODEL©

RYAN WHITE ALL PARTS MEETING, 2010

Like many great discoveries…and this is one of the greatest. It was a mistake.

- Ruth Wakefield invented chocolate chip cookies in the 1930's at the Toll House inn she and her husband ran near Whitman, Massachusetts. She broke up one of the bars of semi-sweet chocolate that Andrew Nestle gave her. She thought that it would mix together with the dough & make all chocolate cookies .

- The Chocolate chip cookie is the most popular kind of cookie in America. Seven billion chocolate chip cookies are eaten annually. Some vendors only sell chocolate chip cookies. Half of the cookies baked in American homes are chocolate chip.

In Short:

- Two existing products were combined to create a new cookie.
- We have not created a new cookie, however have combined two existing systems of care to create a modified system that will meet the needs of patients and agencies.
- This model is only conceptual and is under final evaluation.

History:

- Over the years, treatment of HIV infected persons has become increasingly complicated, expensive and time consuming.
- There is an answer to the plan to deliver comprehensive HIV services in a cost efficient manner consistent with the Public Health Service, DHHS and exceeds the Texas Department of State Health Services Standards of Care.

Plan:

- It became critical that service delivery meet the Standards of Care and at the same time meet the needs of the clients and the agencies providing services.
- Thus the development of a model combining the Public Health Service guidelines for HIV care and combining them with the Community Behavior Health Model, 1966.

Design:

- The behavioral health model has been used successfully for decades in the care and treatment for patients undergoing psychiatric and substance abuse.
- Before now; it has never been overlaid on any other type of chronic illness.

Level A: Acute Risk Management:

- This client has established a history of no-shows and medical non-compliance with regard to treatment regimes. Additionally, this client does not pick up medications in a timely manner.

Level B: Agency Management plus Enhanced Care:

- This patient will exhibit a lesser degree of acuity than that of the acute risk client. This client is consistent with appointments and demonstrates a positive response to enhanced care over the agency-managed client. This system will allow for a higher level of education with regard to medication, co-morbidity's and case management.

Level C: Agency Managed Care:

- This is the current standard of care with visits every 3 months and the average visit being 30-45 minutes in length. As a rule, this patient is compliant with adherence issues and exhibits no special needs.

Level D: Self Managed Care:

- This client is doing very well and exhibits a high level of understanding and acceptance of HIV. This client is active in the learning process and requires a lesser demand for medical care and/or case management. Other criterion includes stability of disease process; independent functioning with no evidence of life destabilizing issues and complies with treatment regimen.

This chart reflects level of functioning with designed service delivery and minimum standard of functioning:

Level	Medical Case Management	Non-Medical Case Management	Medical Visit	Minimum Standard of Functioning
Level A: Acute Risk Management	Contact each time the patient is seen or PRN as specific needs arise	Contact at least 1 x q 1 week	Walk-in Status (triage) PRN	Keep contact with clinic every year
Level B: Agency Management Plus Enhanced Care	Contact each time the patient is seen or PRN as specific needs arise and specialized education regarding special needs topics	Contact at least 1 x q 1 month plus Group Scheduling	Q 2 months or PRN 45-60 minutes	Keeps appointments.
Level C: Agency Management	Contact each time the patient is seen or PRN as specific needs arise	Contact at least 1 x q 1 month	Q 3 months or PRN 30-45 minutes	Keeps appointments, compliant with treatment and adherent with medication.
Level D: Self Management	Contact each time the patient is seen or PRN as specific needs arise	Contact at least 1 x q 3 months	Q 6 months or PRN 15-30 minutes	Keeps appointments, compliant with treatment, adherent with medication, understands medication, completes labs and no evidence of life destabilizing situations.

This chart reflects deliverables to be provided at intervals.

Level	VI/CD4	Nutritional Assessment	Risk Reduction	Pharmacy Review	Adherence Counseling	Substance Abuse/MH Assessment
Level A: Acute Risk Manage-ment	PRN	PRN	Each Visit	Q 1 mo.	Each Visit	Each Visit
Level B: Agency Management Plus Enhanced Care	Q 2 mo. or PRN	Q 2 mo. or PRN	Q 2 mo. or PRN	Q 1 mo. or PRN	Each Visit	Each Visit
Level C: Agency Management	Q 3 mo. or PRN	Q 3 mo. or PRN	Q 3 mo. or PRN	Q 3 mo. or PRN	Each Visit	Each Visit
Level D: Self Management	Q 6mo. or PRN	Q 6 mo. or PRN	Q 6 mo. or PRN	Q 6 mo. or PRN	Each Visit	Each Visit

Retrospective analysis of randomly selected charts: N=100

Level	N	Case Management	Medical Visit	Co-morbidities
Level A: Acute Risk Management	5	Inconsistent, but between 1-5 times per year	Walk-in Status Seen 2-4 times per year	Drug and alcohol abuse, prostitutes, STD's, high viral load and low CD4 counts, Hepatitis C,B; psychiatric disorders
Level B: Agency Management Plus Enhanced Care	29	Every 2-3 months; between 4-6 times	Seen 3-6 times per year	Occasional drug and alcohol use; occasional STD's, fluctuating viral load and CD4, elevated level of resistance; DM and HTN; depression
Level C: Agency Management	48	Every 3 months; approx 4 times per year	Seen 3-5 times per year	Social alcohol and drug use; occasional STD's; consistency with condoms; ND vital load and high CD4. moderate level of resistance; DM and HTN; most depression and psychiatric disorders controlled
Level D: Self Management	18	Every 3 months; from 1-3 times per year	Seen 1-3 times per year	Occasional alcohol and drug use; occasional STD's; consistency with condoms; ND vital load and high CD4. low level of resistance; working class, employed and with steady partners. DM and HTN; controlled psychiatric status

Levels reflecting N, appt variation and issues in each sub-population.

Level	N	Appointments	Missed Appointments	Subpopulation Issues
Level A: Acute Risk Management	5	Scheduled Total: 30 Actual: 15	Missed: 50%	Abuse of clinic services Encourage non adherence Difficult for staff Requires mental and substance abuse counseling and referrals
Level B: Agency Management Plus Enhanced Care	29	Scheduled Total: 164 Actual: 116	Seen 1-2 x per year per patient	Requires more time with pts Housing, groceries and other services Agency dependent Requires mental and substance abuse counseling and referrals
Level C: Agency Management	48	Scheduled Total: 192 Actual: 192	Missed: < 1 per year per patient	This group will be more dependent on agency Housing, groceries, and other services Requires times for patients
Level D: Self Management	18	Scheduled Total: 62 Actual: 36	Missed: 5; but patient rescheduled	Allow patients to work Allows pt to control Encourage adherence Open more spaces for new pt's

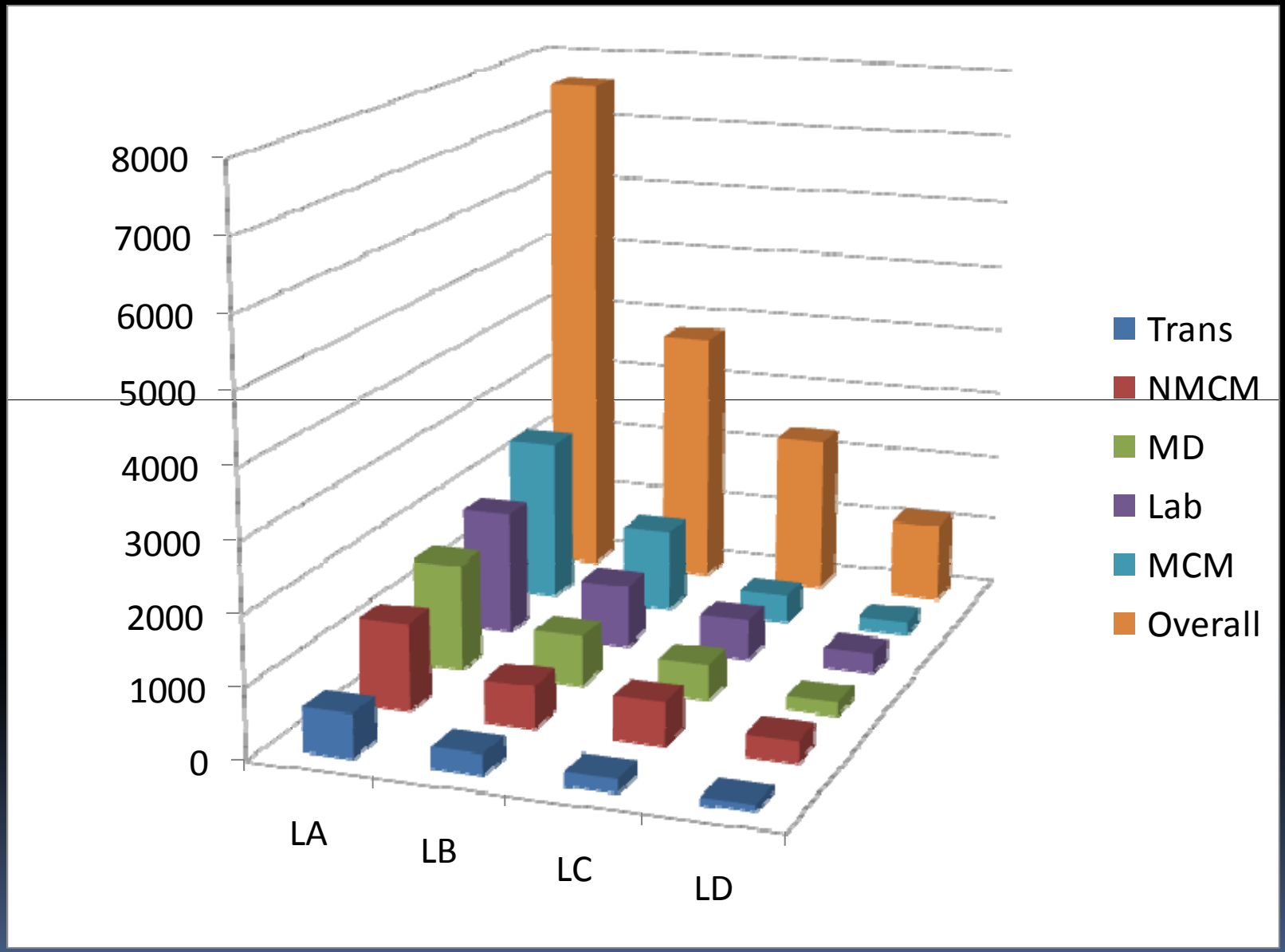
Admin and Finance:

	LA (2 visits)	LB (6 visits)	LC (4 visits)	LD (2 visits)	
Pharmacy	?	?	?	?	
Lab	1,800.00	900.00	600.00	300.00	
MCM	2,400.00	1,200.00	400.00	200.00	
NMCM	1,270.00	600.00	600.00	300.00	
MD	1,560.00	780.00	520.00	260.00	
Nursing	-	-	-	-	
Trans	600.00	300.00	200.00	$ 100.00	
Total	**$ 7,630.00**	**$ 3,780.00**	**$ 2,320.00**	**$ 1,160.00**	
Projected % Actual %	10% 5%	10% 29%	70% 48%	10% 18%	
	381,500	**1,096,200**	**1,113,600**	**208,800**	**$2,800,100**
Average Cost per Visit	$3,815	$630	$580	$580	**/1000**
					$ 2,800.10

1. Based on these percentages, the average cost per patient seen is $2,800 per patient per year. This model decreases the average cost per patient year by utilizing the fixed deliverables revised model. PRN visit may alter the anticipated outcomes.
2. The overall anticipated cost savings and increase capacity based on this 10.10.70.10 formula indicates an approximate **savings of 25%** while **increasing access 20%**.

3. This model allows for new and/or additional patients at no additional cost. Rates reflect direct care only and do not include indirect cost variables.
4. Level A data has been extrapolated from the charts reviewed that reflect the 5%. It is the lack of patient contact that results in additional expenses such as lab, additional staff time and medication.

This bar graph displays the projected decrease in cost by line item and overall considerations.


8000
7000
6000
5000
4000
3000
2000
1000
0
LA
LB
LC
LD
Trans
NMCM
MD
Lab
MCM
Overall

Regardless of cost, the variables are constant and result in the same decrease percentage based on a low at LA to a high at LD ratio. Deliverables are yearly units of service per patient based on level of care.

The cost of $n is not relevant as the delivery system is static thus will result in the same cost savings.

			LA	LB	LC	LD
MD	$n	Per visit	12	6	4	2
MCM	$n	Per unit	48	48	16	8
NMCM	$n	Per unit	52	24	24	12
LAB	$n	Per unit	12	6	4	2
TRANS	$n	Per trip	12	6	4	2

Biomedical Markers for Entry into this Treatment Model:

- Patient willingness to participate in model
- Recommendation from HIV specialist and medical case management
- Patient History in the clinic – minimum 6 months

Biomedical Markers: cont

- Adherence measures –
  - Pharmacy pickups
  - Self adherence
  - Pill count (if applicable)
- Viral load – goal < 48 for at least 3 months
- CD4 > 200 and no opportunistic infections
- No history of active opportunistic infection in last 6 months

Biomedical Markers: cont

- Co-morbidities - Patient accessibility to a primary doctor if needed for treatment of co-morbid conditions
- Depression Scale – no signs of symptoms of depression
- Psychosocial Evaluation – i.e.: substance abuse, social stressors, etc…

Implementation:

- Patient enters system at a level determined by the MD, MCM and Patient assessment.
- Assess patients at each visit and reassign to appropriate level if necessary.
- This system can utilize Texas 3-part patient acuity stratification system, and further stratify and designate NMCM (peer case managers) for contact interventions

Implementation: cont

- Identify disease areas & support group system / staff into this model (E.G. Substance Abuse, Mental Health, Diabetes Mellitus, Hyperlipidemia, Obesity, HTN/Cholesterol, Life Destabilizing Events, etc…)
- A waited Acuity Scale has been created and is to be administered at each visit to drive care level implementation.

However:

The scale utilized worked on a unique individual basis and does not apply across the board.

A new Acuity Scale

- Thanks to a collaborative meeting with the Thomas Street Clinic, Houston, Texas and the La Fe Care Center in El Paso, Texas, new forms are now being analyzed. The forms were provided by the Thomas Street Clinic.
- Copies of the new evaluation tools have been provided as paper handouts. Electronic copies are available upon request.

Conclusions:

- This model may be labor intensive in the beginning but will result in a system of care that will:
- Meet the patient's needs based on their needs,
- Demonstrate a significant decrease in cost of care,
- Increase access to care and
- Allow for justification of cost and level of care for any patient at any time utilizing both clinical and behavioral markers.

Designed by:

- Charles R. Smith
- Executive Director
- Crsmith.vac@tachc.org

- Fernando Garcia, MD
- Medical Director
- Fgarcia.vac@tachc.org