

# MedStar's Community Health & Advanced Practice Paramedic Program

*"Stop Responding  
to Calls we can  
Prevent..."*



# Traditional EMS

- You Call, We Haul
- 90% No Life Threats
- Current Educational Standards
- High Burnout Rates
- Complacency Kill



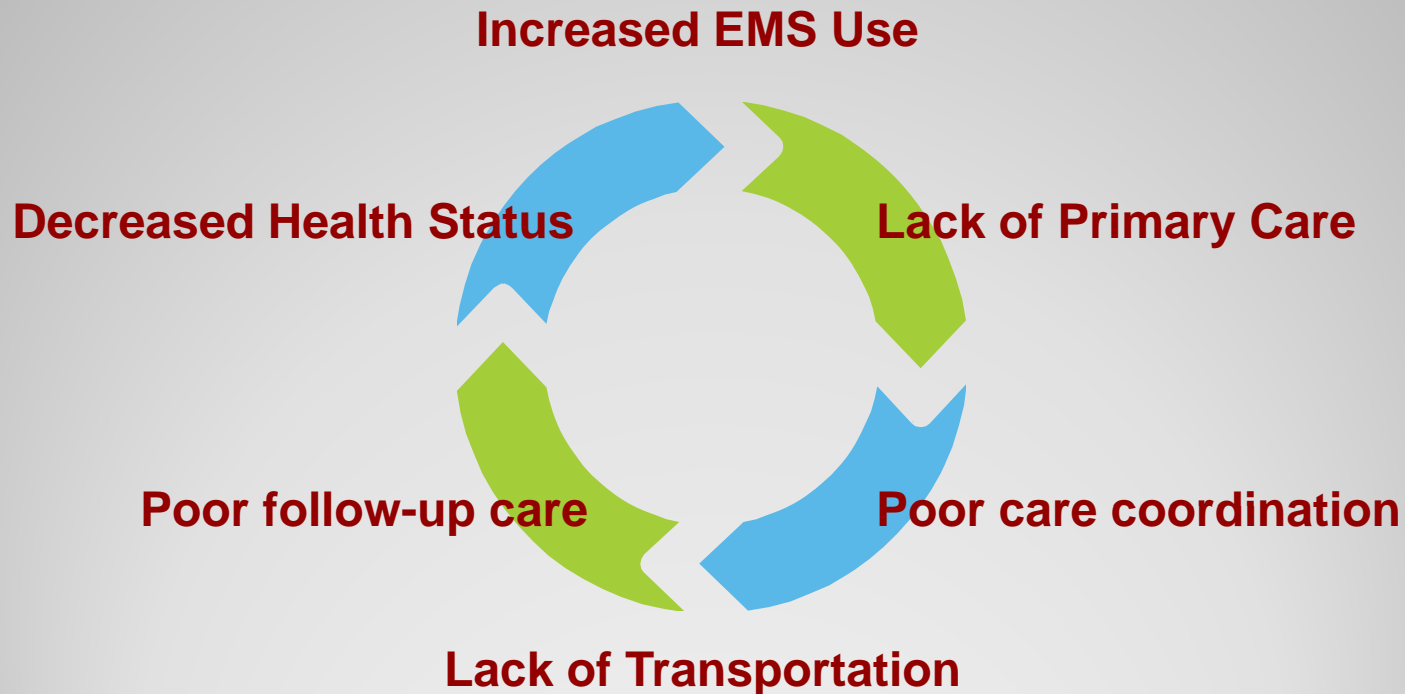
# New EMS Model!

- Right Resource
- Right Time
- Right Patient
- Right Outcome



# Vicious Cycle...

- The *vicious cycle* of health care for the underserved



# Community Health Patients

- No defined source of primary care
  - “Navigating the system” issue
    - Connect the dots
- EMS becomes primary care
  - “My primary care doctor is Dr. XXXX” (an E/D doc!)
- Minor conditions become major syndromes
  - Leads to preventable admissions
- Revolving door medicine
  - Patient’s hospital shop for meds or psych care
    - Or even points of interest

# Economic Impact - EMS

- FY 2008/09 Analysis – MedStar Only
- Lost Revenue
  - 21 “Frequent flyer” patients
    - 812 unnecessary responses
    - \$975,000 charges (mostly uncollectable)
- Ambulance Costs
  - 1,218 ambulance Unit Hours Consumed
  - Operational Unit Hour Cost = \$116.18
  - Total Cost = \$141,507



# Economic Impact - Hospital

- Lost Revenue
  - 812 transports by ambulance to emergency departments
  - **\$2,997,904** emergency department charges billed
    - At ~\$3,692/visit\*
  - Minimal Collected
- Costs
  - **\$345,912** Emergency department costs
    - Emergency department Visit
      - At ~\$426\*



*\*2010 Survey of EPAB Hospitals*

# Resource Impact...

- 4,872 E-D bed hours consumed
- 1,218 ambulance unit hours consumed
  - Not available for other calls
- Crowded emergency departments = long waits
  - Ambulance patients + “walk-ins”
- Sicker patients = more hospital
  - Typically uncompensated



# The Challenge...

- How do we as a community:
  - Deliver the right resource, to the right patient at the right time?
  - “Connect the dots” for disenfranchised patients?
  - Help people become more healthy
    - Personal responsibility
  - Save resources
  - Save money



# Community Health Program

- Identify at-risk patients
  - Frequent users reports internally
  - Field referrals
  - Community partner agency referrals
- Develop a care plan
  - Including designating a Medical Home
    - Only transported THERE!
- Visit them proactively
  - Teach them how to manage their care
  - In their environment!
- Give them an alternative to 9-1-1

# Community Health Program

- 'Clients' given 10-digit non-emergency access #
  - 24 x 7
- Call taker triages call to assure non-emergency
  - Same as 9-1-1 process
- If non-emergency
  - Advanced Practice Paramedic (APP) goes to assess and treat patient
    - Or simply talk on the phone
- Client can still call 9-1-1
  - If so, response per EMD protocol
  - APP also responds

# Community Health Program

- Alternative dispositions
  - Clinic appointment
    - Including mental health
  - Mobile Mental Health Crisis Team
  - Bus Pass
    - Tracking use on ePCR
    - Compare to transportation authority ride data
  - Off bus route?
    - Non-Medical Transportation contractor

# System Abuser Status

- If CHP does not change behavior
- Medical Control Authority designates "System Abuser"
  - Single destination with coordinated care plan
  - In severe cases, APP can call Medical Director and deny ambulance transport

# CHF Program

- Launched 8/1/2010
- Case worker refers CHF discharges “at-risk” for bounce-back within 30-45 days
- APP visits at home and monitors status
  - Vitals, BS, weight, 12L, dependent edema, medication compliance
  - If need be – refer to OFFICE for follow-up
  - Prevent re-admit
- Probable funding stream
- Sample case...

# CHP/CHF Tracking

- On-Line / Patient Side Tracking:

MedStar Intranet



Home **APP** Billing Clinical Discussion Board Communications EPAB Field Ops Fleet Human Resources IT Support Leadership Development Medical Records MWR Operations - Admin

- View All Site Content
- Documents**
  - Shared Documents
- Lists**
  - Calendar
  - Tasks
- Discussions**
  - Team Discussion
- Sites**
- People and Groups**
- Recycle Bin

MedStar Intranet > APP

This site was created per Matt Zavadsky's request. The users will share documents at this site for APP.

## CHP Client List

New	Actions	Settings								
Last Name	First Name	DOB	Address	City	Phone #	Home Hospital	Status	Last 9-1-1 Call	Last CHP Visit↓	Visit Schedule
[REDACTED]	Clarence	7/22/1945	[REDACTED]	fort worth	[REDACTED]	Harris	CHF Referral		9/10/2010	sunday and wednesday 10a-12p please call first.
[REDACTED]	John	11/21/1973	[REDACTED]	Ft. Worth	[REDACTED]	All St's for psych/Plaza for medical	Active	9/1/2010	9/9/2010	Phone call only on Tuesday and Thursday
[REDACTED]	Carla	11/26/1954	[REDACTED]	Ft. Worth	[REDACTED]	HMEFW	Active	8/21/2010	9/7/2010	home visit on tue around 1400 phone visit on thursdays
[REDACTED]	Raymond	1/16/1977	[REDACTED]	Fort Worth	[REDACTED]	JPS	Active	8/29/2010	9/6/2010	Mon 10a-8p
[REDACTED]	Shannon	7/1/1969	[REDACTED]	Fort Worth	[REDACTED]	CHF / Harris	CHF referral / refusal	7/9/2010	9/4/2010	
[REDACTED]	Tomed	8/14/1978	[REDACTED]	Fort Worth	[REDACTED]		Referral-THR		9/2/2010	
[REDACTED]	Anthony	3/31/1969	[REDACTED]		[REDACTED]	JPS	System Abuser	9/1/2010	8/29/2010	



# First Year Results

Lname	Fname	Date	9-1-1 Use				Change	Referred By	Status
		Enrolled	X Days Pre	Freq/mo	Post	Freq/mo			
A	L	8/2/2010	6	6.0				Internal	Watch List
A	S	7/1/1969						THR	Refused Program
A	S	12/4/1953	8	2.7	4	0.7		THR	Graduated
B	A	7/30/1936						BALS	Refused Program
B	T	8/14/1978						THR	Inactive
B	J	7/13/2010	3	1.5				THR	Inactive
B	G	7/13/2010	3	3.0				THR	Unable to Locate
C	G	5/24/1982	11	3.7	1	0.1	-96.1%	Internal	Graduated
C	P	6/15/2010	4	1.3	15	3.8	181.3%	THR	Active
C	D	7/27/2009	5	1.7	9	0.8	-50.9%	Internal	Graduated
C	P	11/14/1964						THR	CHF/Active
C	K	5/21/2010	18	6.0	9	1.8	-70.0%	Internal	Refused Program
C	O	6/1/2010						Baylor	Inactive
D	J	7/27/2009	27	9.0	35	2.3	-74.1%	Internal	Active
D	C	8/31/2010						THR	Inactive
D	L	6/21/2010	3	3.0	1	0.5	-83.3%	Baylor	Deceased
D	R	9/17/2010	20	6.7	0	0.0	-100.0%	Internal	Graduated
D	K	4/30/2010						THR	Refused Program
D	D	1/1/2010	20	6.7	5	0.7	-89.3%	Internal	Graduated
E	J	2/10/2010	19	6.3	0	0.0	-100.0%	Internal	Inactive
E	J	6/7/2010	3	1.5	0	0.0		THR	Inactive
F	L	9/30/2010						THR/CHF	Active
F	A	7/13/2010	1	1.0	0	0.0	-100.0%	THR	Inactive
F	R	4/30/2010	3	3.0	10	1.7	-44.4%	THR	Active
G	S	9/16/2010	5	1.0	1	1.0	0.0%	THR	Active
G	N	5/10/2010	1	1.0	1	0.2	-83.3%	JPS	Graduated
G	P	5/27/2010	8	8.0	1	0.5	-93.8%	BALS	Graduated
G	T	9/15/2010	16	1.3	1	1.0	-25.0%	BALS/CHF	Active
H	G	1/31/2010	6	3.0	9	0.9	-70.0%	Internal	Active
H	M	10/12/2010	4	0.4	1	1.0	150.0%	Dr. Davis	Active
H	A	10/21/2010	19	6.3				FWFD	Active
H	D	4/12/2010	18	6.0	15	7.5	25.0%	Internal	Active
K	A	1/1/2010	8	2.7	5	0.7	-73.2%	Internal	Graduated
L	E	5/13/2010	12	6.0	8	0.6	-89.6%	Internal	Refused Program
L	L	6/9/2010	3	1.0	3	0.8	-25.0%	THR	Watch List
M	L	9/3/2010	3	0.6	0	0.0	-100.0%	THR/CHF	Active
M	L	6/7/2010	1	0.5	0	0.0	-100.0%	THR	Graduated
M	J	6/21/2010	38	3.8	24	4.8	26.3%	Internal	Active
M	P	8/2/2010	15	0.2	0	0.0	-100.0%	Internal	Graduated
M	D	5/3/2010	0	0.0	0	0.0		Dr. Davis	Refused Program
M	M	9/13/2010	1	0.1	0	0.0	-100.0%	THR	Watch List
M	C	4/12/2010	18	9.0	5	1.4	-84.1%	Internal	Active
P	T	6/7/2010	0	0.0	0	0.0		THR	Watch List
P	A	8/29/2010	25	16.7	16	8.0	-52.0%	Internal	Active
P	C	10/14/2010	0	0.0	0	0.0		BALS	Pending
P	C	7/27/2009	9	3.0	10	2.5	-16.7%	Internal	Active
P	A	11/1/2009	16	5.3	27	2.5	-54.0%	Internal	Active
P	E	7/13/2010	1	1.0	0	0.0	-100.0%	THR	Watch List
R	L	2/17/2010	4	2.0	32	4.0	100.0%	Internal	Active
R	A	5/7/2010	23	23.0	20	4.0	-82.6%	Internal	Active
R	H	1/28/2010	21	7.0	25	2.5	-64.3%	Internal	Active
R	E	7/27/2009	24	8.0	17	1.7	-78.8%	Internal	Graduated
R	R	9/15/2010						THR	Watch List
S	E	8/27/2010	2	0.2	0	0.0	-100.0%	THR/CHF	Deceased
S	C	10/22/2010	1	0.1	0	0.0			
S	S	8/24/2010	29	14.5	9	4.5	-69.0%	Internal	Active
S	M	1/31/2010	7	3.5	5	0.5	-85.7%	Internal	Watch List
S	C	7/1/2010	2	0.3	2	0.5	50.0%	THR	Watch List
S	G	12/22/2009	4	0.7	12	1.2	80.0%	Internal	Watch List
S	L	2/8/2010	9	1.8	9	1.1	-37.5%	Internal	Watch List
S	M	7/23/2010	3	3.0	0	0.0	-100.0%	THR	Inactive
S	S	7/13/2010	18	2.6	5	1.7	-35.2%	THR	Active
T	T	5/12/2010	10	3.3	14	2.8	-16.0%	Internal	Watch List
T	L	9/13/2010	4	0.3	1	1.0	200.0%	THR	Watch List
V	L	10/9/2010	17	3.4	2	2.0	-41.2%	Internal	Active
W	N	10/26/2010	1	1.0				THR/CHF	Pending
W	B	7/27/2009	7	2.3	2	0.2	-90.5%	Internal	Graduated
W	C	9/2/2010	4	1.0	3	2.0		THR/CHF	Active
W	K	8/2/2010	3	3.0	4	2.0	-33.3%	Internal	Pending
W	A	10/20/2010	7	0.6				THR/CHF	Active
W	S	4/29/2010	7	1.8	19	3.2	81.0%	THR	Active
W	J	3/9/2010	13	10.0	9	1.3	-87.1%	Salvation Army	Active
Total			601	233.3	406	81.9	-64.9%		

# First Year Results

July 29, 2009 - October 27, 2010 Statistics

	Pre	Post	Reduction	%
<i>Average Monthly CHP 9-1-1 volume</i>	233.3	81.9	151.4	-64.9%
<b><u>Annualized</u></b>				
EMS Charges	\$ 3,359,589	\$ 1,179,802	\$ <b>2,179,787</b>	-64.9%
EMS Costs	\$ 1,075,068	\$ 377,536	\$ <b>697,532</b>	-64.9%
E-D Charges	\$ 10,336,334	\$ 3,629,856	\$ <b>6,706,478</b>	-64.9%
E-D Costs	\$ 1,192,654	\$ 418,830	\$ <b>773,824</b>	-64.9%
E-D Bed Hours	16,798	5,899	<b>10,899</b>	-64.9%

**Notes:**

- 1Average EMS Patient Charge/Transport \$ 1,200
  - 2Average EMS Cost/Transport \$ 384
  - 3Average E-R charge \$ 3,692
  - 4Average E-R Cost \$ 426
  - 5Average E-R bed hours for primary care visit 6
- {Compiled from JPS/THR/Huguley}

# Advanced Practice Paramedics

- 8 Senior paramedics selected and trained
  - CCT certification and APP training
    - Enhanced assessment/treatment
      - Therapeutic hypothermia
      - CCR
      - Bereavement counseling
    - Navigating community health resources
    - Mental health resources
  - Clinical rotations
    - Cath lab, ICU, MHMR Crisis teams, Homeless shelters and community clinics

# Advanced Practice Paramedics

- Both ends of the Spectrum
  - High Frequency/Low Acuity calls (EMD "OMEGA" level)
    - "Sick Person"
      - With no priority symptoms
    - All CHP patients
  - Low Frequency/High Acuity calls (EMD "ECHO" level)
    - Cardiac Arrest (active and DOS)
    - Crew request for 2<sup>nd</sup> opinion AMA's
  - Critical Care Transport
    - Never before done by MedStar

# The M.I.B. Team!



# High Acuity Calls

- CPR Calls
  - Overall scene management
    - “The checklist”
  - Hypothermia protocol for ROSC
  - Family counseling for field termination of efforts
    - Including bereavement counseling
- High Risk Procedures
  - Surgical airways, etc.
- Launched CCT service using APPs
  - Previously lost revenue and provider not reliable
    - Added \$303,000 gross and \$200,000 net revenue so far



# Homeless Shelter Calls...

- Some people call 9-1-1
  - *To see if they should have called 9-1-1!*
- Trained **shelter staff** to access 10-digit # if criteria met
  - Like the CHP patients
  - If "OMEGA" call...
    - APP goes alone to the call
    - Arrange appropriate resource and transportation

# Police Lock-Up Calls

- “Jail-itis” calls
  - BGL checks
  - Medication checks, et. al.
- Used to tie up ambulances waiting for officer to transport
  - Who would then often release the arrestee
    - Rather than have PD sit at the hospital
- APP responds to ALPHA and OMEGA level calls
  - If transport needed, officer is called FIRST
  - Once on-scene, THEN ambulance called via radio for transport

# MedStar Impacts

- Response time compliance 5 straight months
  - 1<sup>st</sup> time ever with new, more strict standards
  - 6% increase in call volume (summertime)
  - 2% increase in unit hours
- CCT revenue offset 50% of direct program costs
  - So far – could be more soon...
- Reduced Budgeted Unit Hours
  - Meeting response time compliance with 80% schedule efficiency
  - Saved \$950,000 in payroll costs

# CHP Future

- Solo Omega Responses to 9-1-1 calls
- Accountable Care Organizations
  - We're ready!
- Medical Home for patients
  - Primary Care Involvement
  - Alternative Destinations
- Shared Electronic Medical Record
- In Field Evaluation
- No Transport Follow Up

# How Can My Program Start

- Identify Needs
- Identify Frequent Users/Abusers
- Medical Community Support
- Political Support
  - Budgetary Considerations



# *Questions?*

