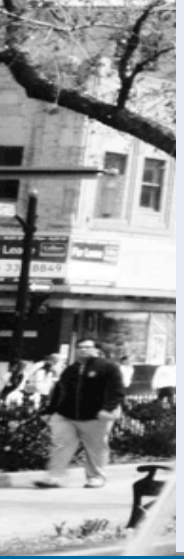
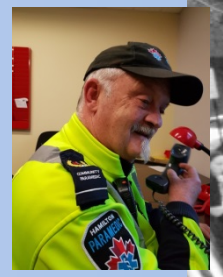
SYSTEM PLANNING & IMPROVEMENT FOR COMMUNITY PARAMEDICINE

IRCP JUNE 15-16, 2019

CHARLOTTETOWN, P.E.I





Joe Pedulla, CHE,PMP,SSBB(c),MHSC,ACP,RRT

Agenda

1. Health Systems Planning
2. Improving performance - throughput
3. Improving effectiveness – keeping people safely at home
4. Summary
5. Questions

HPS CP Programs

1. Home visits
   - 911 callers identified by front line Paramedics
   - Referrals from partner agencies
2. Clinics
   - 9 City Housing Buildings (mostly seniors)
   - Wellness clinic
3. Social Navigator Program
   - Paramedic & Police Officer
   - Individuals who have housing insecurity / criminal history
4. Remote Patient Monitoring
   - Chronic disease – CHF / COPD / Diabetes
   - Daily vitals transmitted to software that alerts when exceed limits

Health System Planning

1. “What?” - Defining the Mission / Vision/ Value / Strategy
2. “For who?” - Population Profiles / 911 Call Analysis
3. “How?” - Environmental Scan, Evaluation Plan
4. “With who?” - Need / Gap analysis / Partnership
5. “Which way?” - System Mapping
6. “Make it better” - System Evaluation & Improvement

Make it Better- System Evaluation

Balanced Scorecard Notes & KPI (CP - @HOME/RPM SECTOR)

Client Experience

Client satisfaction (>80%)
Confidence in client's ability to cope (↑15%)

System Performance

Time to first contact (<24 hrs.)
Bounce back from NPC (<5%)
Adverse event rate (<1%)
Use of technology (≥70%)
Referral rates to and from external partner (↑ 5%)
# of new partner agencies (≥1/yr..)

Organizational Learning & Growth

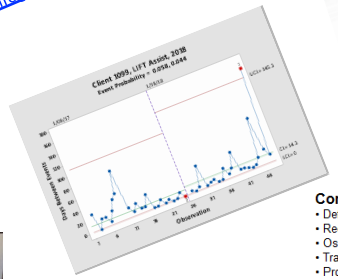
Staff/stakeholder/CP satisfaction (80%)
Front line referrals (↑5%)
Comments/month from staff/stakeholders outside CP (≥3/ quarter)
CP specific CME (≥1/yr.)

Financial Performance

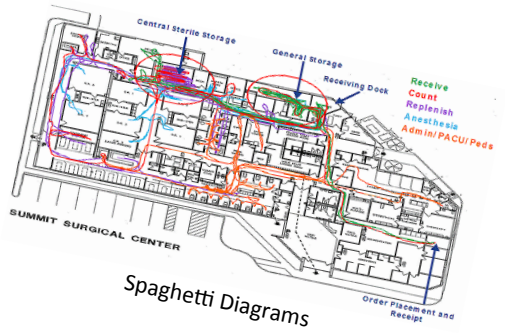
of days between calls for clients (↑ 5%)
#of repeat calls / identified client (↓15%)
# of new repeat callers (↓10%)
Time on task (<90 minutes)
Favorable ICER (incremental cost effectiveness ratio)

Make it better - tools

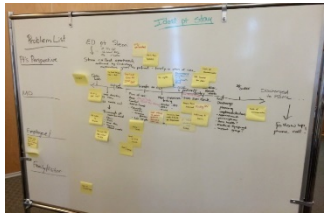
System Framework
(https://www.who.int/emergencycare/emergencycare_infographic/en/)



Population Analysis
https://www.unfpa.org/psa



Spaghetti Diagrams



Value Stream Mapping / Patient Value Stream Mapping / Process Mapping

Containment of Unexpected Events:
- Deference to expertise
- Redundancy
- Oscillation between hierarchical and flat/ decentralised structures
- Training for competence
- Procedures for 'unexpected' events

Problem Anticipation:
- Preoccupation with failure
- Reluctance to simplify
- Sensitivity to operations

High Reliability Organisations

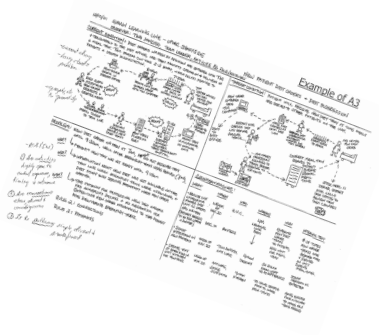
Just Culture:
- Encouragement to report without fear of blame
- Individual accountability
- Ability to abandon work on safety grounds
- Open discussion of errors

Definition:
- Tight coupling (integrated & coordinated)
- Catastrophic consequences
- Interactive complexity (interdependence)

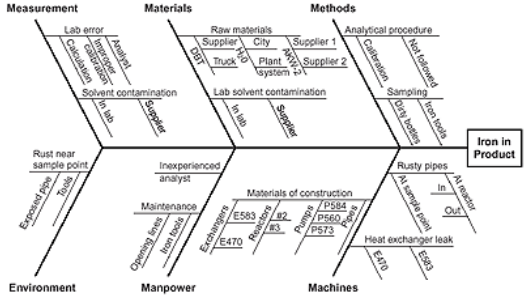
Learning Orientation:
- Continuous technical training
- Open communication
- System failure and control failure analysis of high consequence investigations
- Procedures in line with knowledge base and practices

Mindful Leadership:
- Bottom-up communication of bad news
- Proactive processes
- Management by exception
- Safety production balance
- Engagement with front-line staff

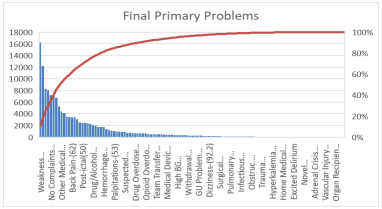
High Reliability Organisations: A review of the literature
Health and Safety Executive 2011



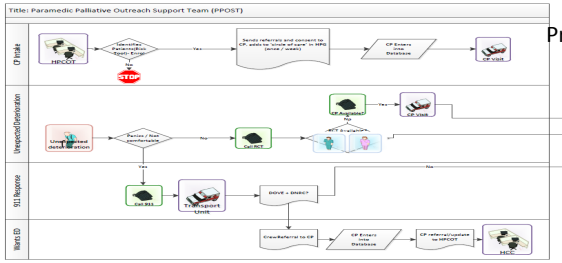
Just Culture of safety
https://www.cmpa-acpm.ca/serve/docs/ela/goodpracticesguide/pages/patient_safety/just_culture/just_culture_safety-e.html



Fishbone diagram
https://asq.org/quality-resources/fishbone

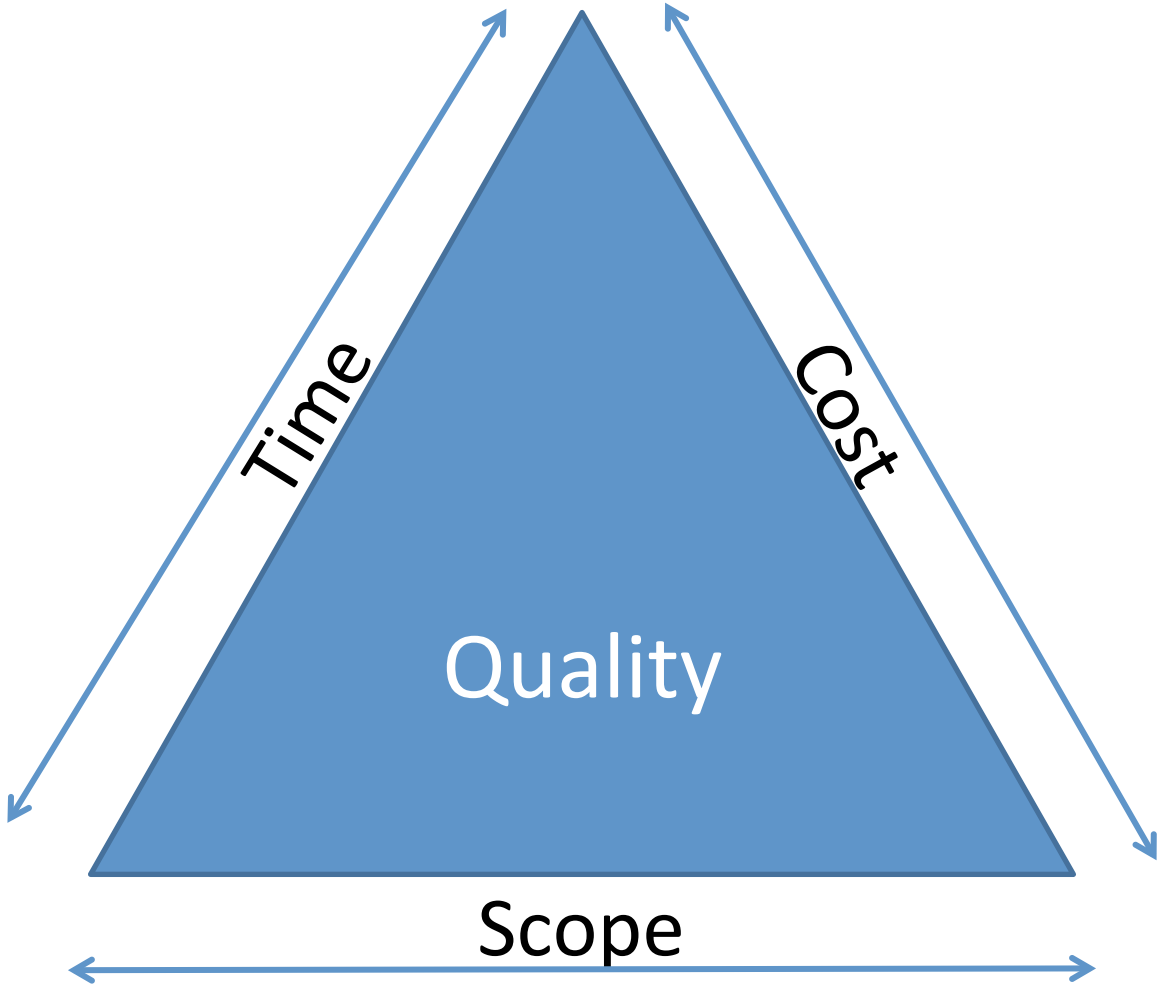


Pareto Diagrams

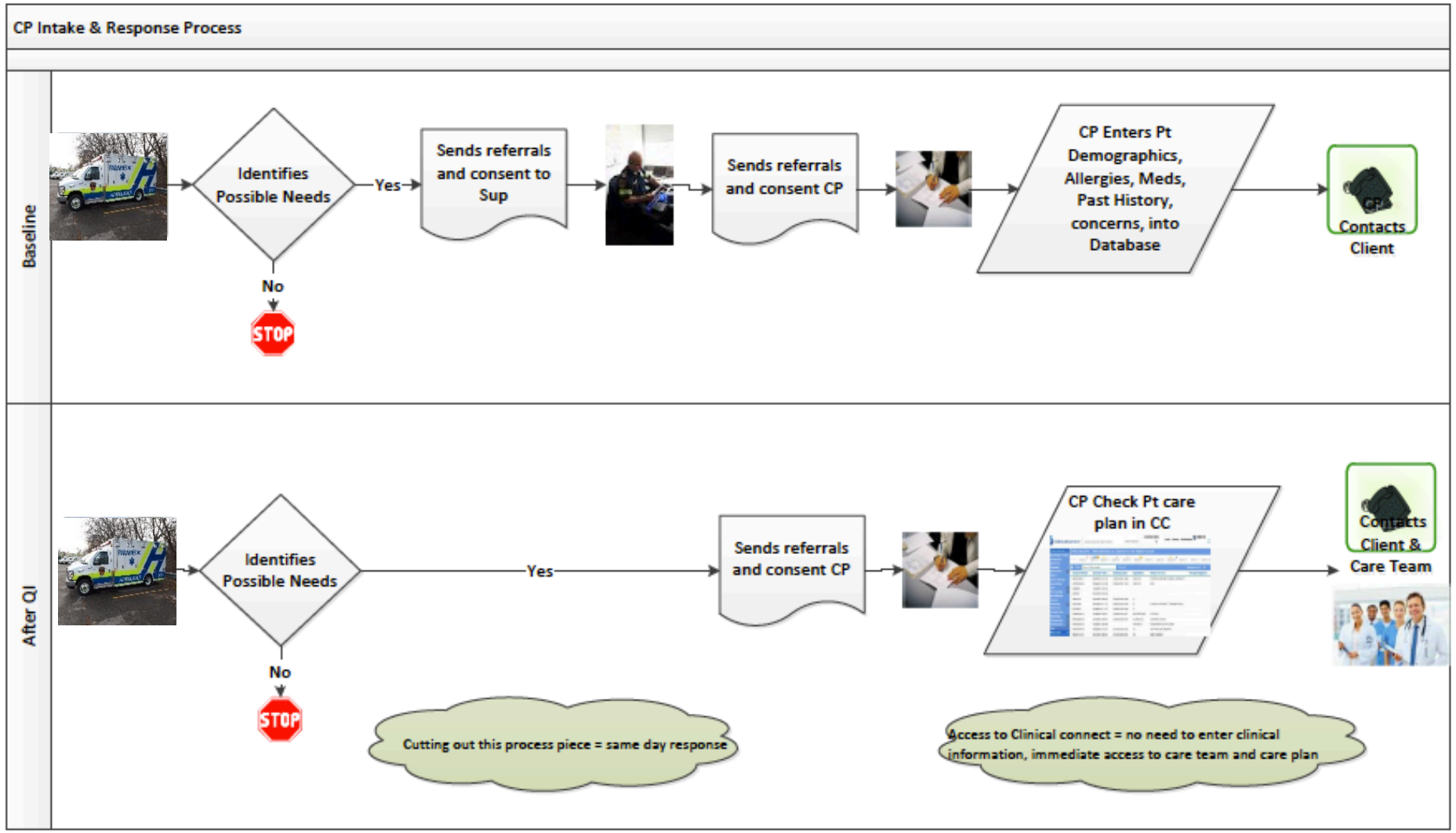


Process Mapping

Make it Better- System Evaluation



Freeing up time to care…VSM



Generic Chronic Illness Trajectory

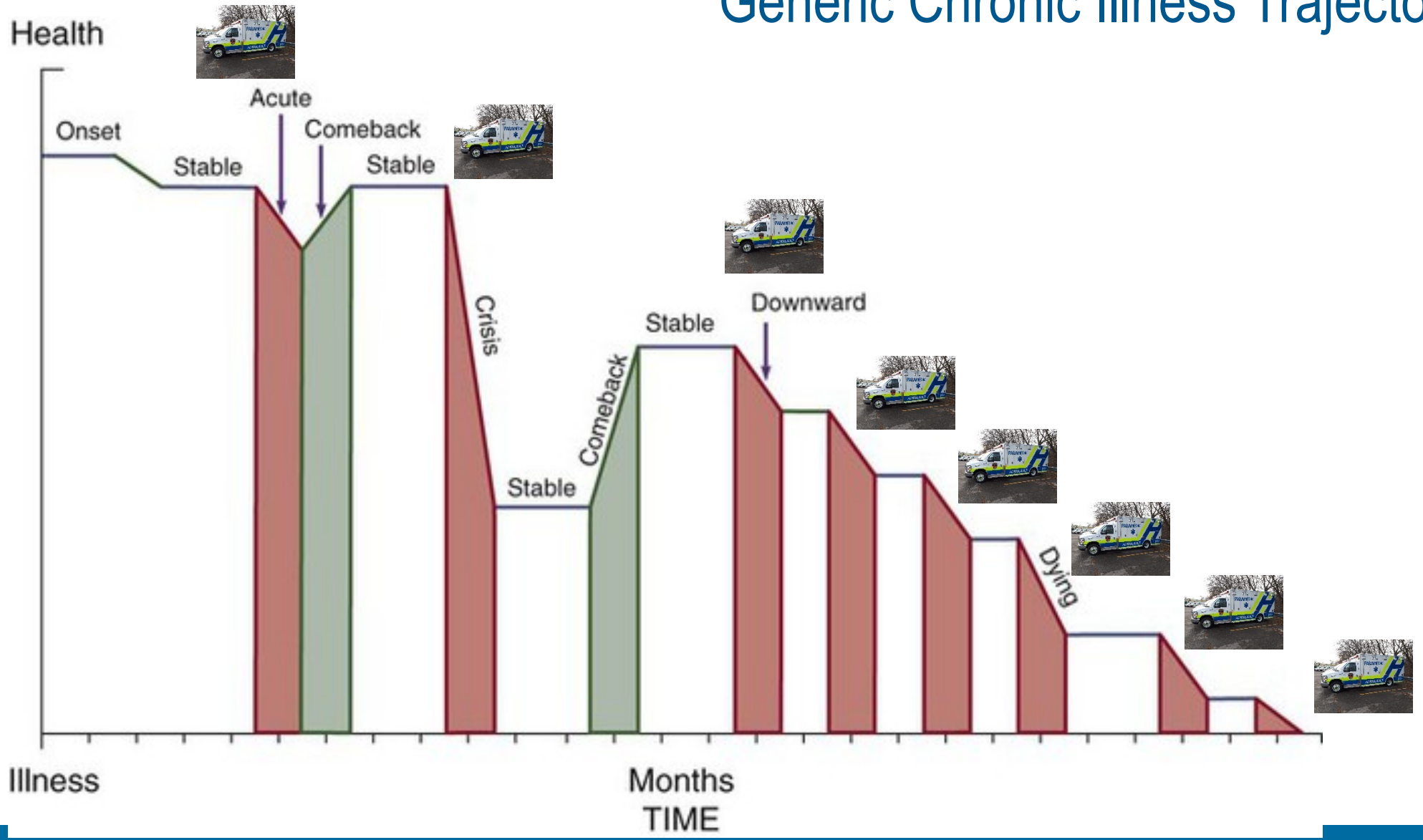


Image downloaded from https://nursekey.com/chronic-illness-and-older-adults/ May 9,2019

Generic Chronic Illness Trajectory

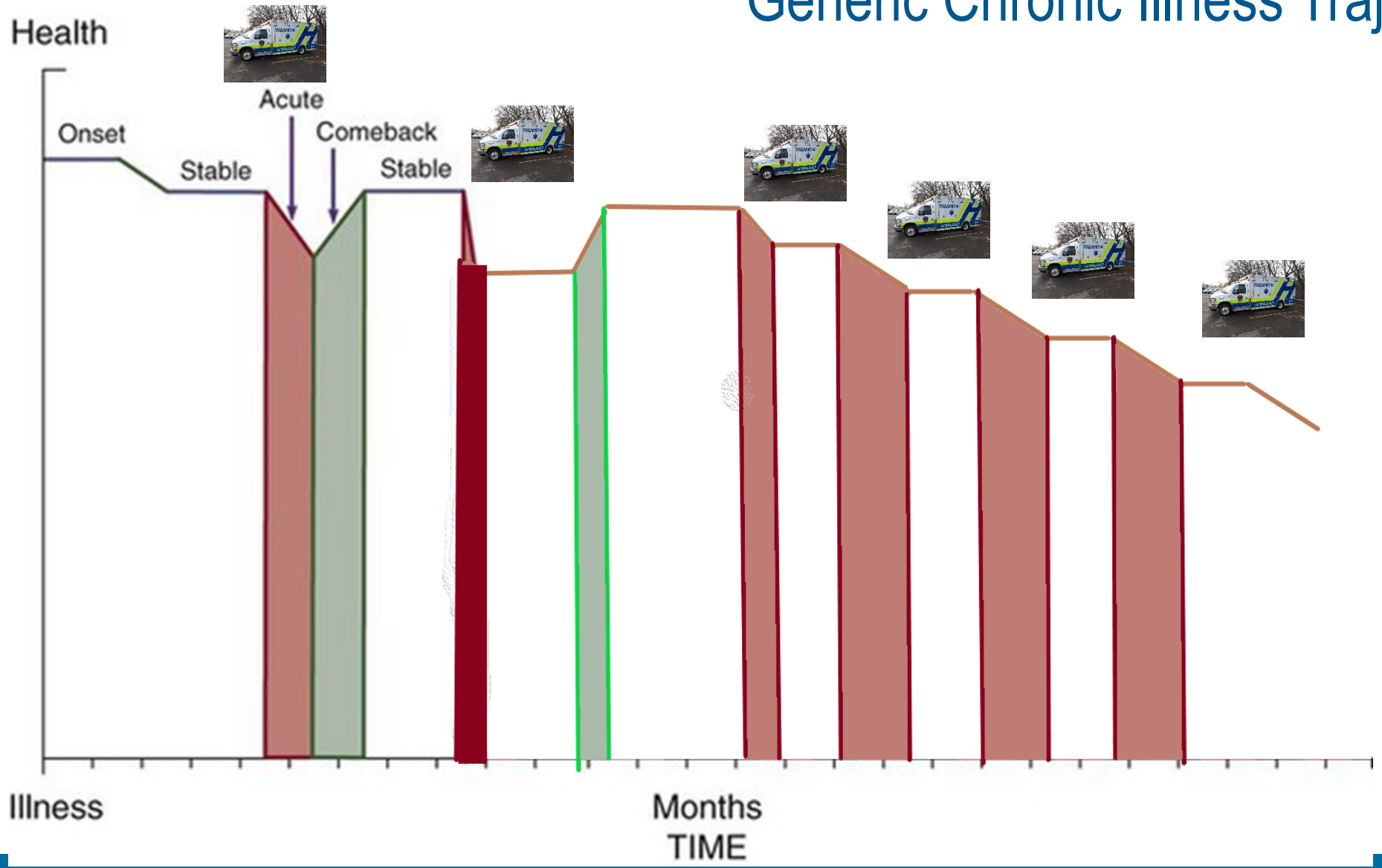
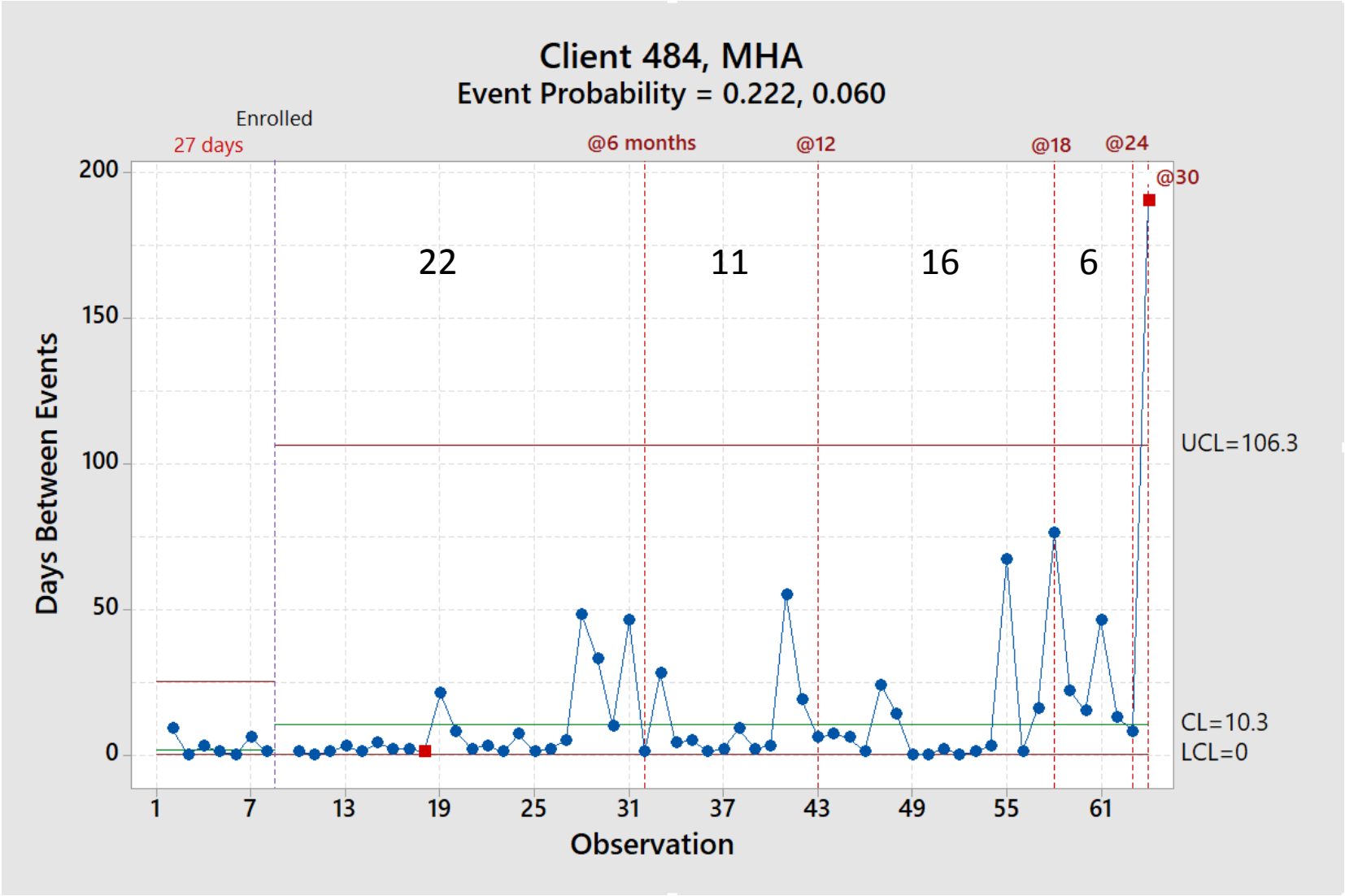


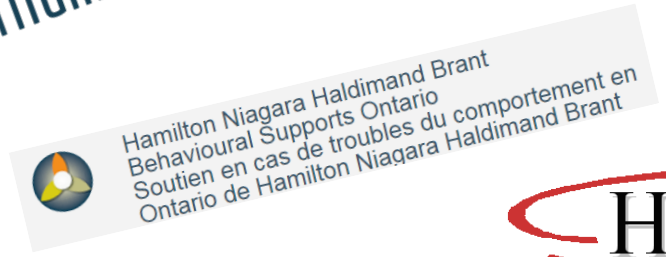
Image downloaded from https://nursekey.com/chronic-illness-and-older-adults/ May 9,2019


YOUR COMPANY
your custom text, no additional cost
YOUR DEPARTMENT
HAS PROUDLY WORKED
291
DAYS
WITHOUT A LOST TIME ACCIDENT
ACCIDENTS ARE AVOIDABLE

G charts


Client 484, MHA
Event Probability = 0.222, 0.060
Enrolled
27 days
@6 months
@12
@18
@24
@30
22
11
16
6
200
150
100
50
0
Days Between Events
UCL=106.3
CL=10.3
LCL=0
1
7
13
19
25
31
37
43
49
55
61
Observation

With who? - Partnerships



Did it work?

	2017/18	2018/19	% change
Enrolled	114	444	289%
Home visits	357	240	-33%
Referrals to partners	206	319	54%
Clinic Visits	1440	2168	51%
Remote Patient Monitoring	35	58	66%
Reduction in repeat calls*	32%	67%	109%

For who?

Highest impact

# of calls / yr.	# of unique pts	Total calls	call / patient
>=80	2	185	92.5
40-79	14	688	49.1
20-39	36	918	25.5
10-19	190	2391	12.6
5-9	1013	6199	6.1
3-4	2912	9610	3.3
1-2	37381	43124	1.2

Top 5 populations
Mental Health & Addictions
Falls / Lift Assists
Chronic Disease
Elderly / LTC
Palliative Care

Sum of repeat calls >=3	19991
# unique patients with >= 3 calls	4167
Total # of calls	63115
# of unique patients with 1 or 2 calls	43124
# of calls / day for repeat callers	55

32% of all calls are accounted by 10% of 911 callers

Sum – Lessons Learned

- Formal approach to system planning helps identify focus areas.
- Front line involvement in design is vital
- Focus on integrated partnerships
- Identify populations that are ‘impactable’
- Use improvement tools to define / refine system performance

Hamilton Niagara Haldimand Brant **LHIN**
RLISS de Hamilton Niagara Haldimand Brant

IMAGINE

a health care system where you and your loved ones get high quality care, where and when you need it.

We ~~think~~ know it's possible.

The Hamilton Niagara Haldimand Brant (HNHB) Local Health Integration Network (LHIN) is taking ACTION to put YOU at the centre of high quality care by changing the way the health care system works to serve you better.

We're going to do better for people like Bernice.
We've changed her name, but her story is real.

NOW
Cost of Care ≈ $500,000
(Estimated over 5 years)

FUTURE
Cost of Care ≈ $100,000
(Estimated over 5 years)

82-year-old Bernice lives at home and is visited weekly by her children and a personal support worker from the Community Care Access Centre (CCAC). She falls and gashes her arm.

- Ambulance takes her to hospital for treatment.
- No one in her circle of care is notified.

- Paramedic treats her in her home, notifies her family doctor right away, and makes a referral for a geriatric assessment.
- Providers in her circle of care know what's happening with Bernice in real time.

- CCAC surprised by injury.

- Enrolled in a falls prevention program to strengthen her muscles.
- Attends bingo with her friends.

One year later, she falls and breaks her hip. Ambulance takes her to local hospital.

- Waits in emergency department for three days, then transferred to another hospital for surgery.
- Develops skin breakdown while waiting.
- Goes back to local hospital and contracts hospital infection during six-month recovery.
- Functional ability steadily declines.

- Transferred right away to designated referral hospital for surgery.
- Goes back to local hospital to recover.
- One week later, moves to transitional care program for one month to regain functional ability.

- Bernice sells her home and moves to a long-term care home.

- Bernice continues to live at home with ongoing support.

Photo by Photoka

This is just Bernice's story.
Picture a health care system where we do better for 10, 100 or even 1,000 people just like Bernice.

Joe Pedulla, CHE,PMP,SSBB(c),MHSC,ACP,RRT

Healthy & Safe Communities
Hamilton Paramedic Service – CP Sector