

My practicum experience as a resident

- Home department - Internal Medicine
- Practicum experience – Improving the care for hospitalized patients with community-acquired pneumonia (CAP)

How we measured CAP performance in 2003

1. Percentage of patients receiving antibiotics within four hours of arrival
2. Percentage of patients receiving appropriate antibiotics
3. Percentage of patients receiving blood cultures
4. Percentage of eligible patients receiving a pneumococcal vaccination prior to discharge
5. Percentage of eligible patients receiving an influenza vaccination prior to discharge
6. Percentage of eligible patients receiving smoking cessation advice or counseling prior to discharge

How well did we care for CAP patients in 2003?

	National (%)	DHMC (%)
Abx < 4 hours	54	62
Oxygenation	98	100
Blood cultures	82	62
Pneumovax	43	38
Smoking	35	49
Composite	30	10

Building knowledge of our particular CAP context and process

- Provider habits
 - Time had not been an important consideration in treatment for CAP
- Process of care
 - Defer treatment decisions to the admitting residents for “teaching” purposes
 - “Inpatient” treatments were not usually given in the outpatient clinic
 - “Outpatient” treatments were not usually given in the inpatient setting

Building knowledge of our particular CAP context and process

- System Issues
 - Significant delays in admitting patients from the ED and clinic were occurring due to a lack of inpatient bed openings
 - Loss of information and lapses in treatment were occurring during patient “handoffs” and transfers of care
 - Multiple admissions to an on-call team created delays in the admission process

Building knowledge of our particular CAP context and process

- Bottom Line
 - No system existed to ensure the reliable delivery of evidence based care for CAP patients hospitalized at DHMC

Our improvement interventions

1. Developed systems to provide initial antibiotics at the location of diagnosis (ED, outpatient clinics)
2. Developed standard admission orders and antibiotic guidelines based on current evidence
3. Developed a standing order to allow nurses to assess and deliver necessary vaccinations without a doctor's order
4. Created a real time feedback system that informed providers on how their patients received CAP care

Was there measured improvement?

	2003 (%) Baseline
Time to treat	69
Blood cultures	71
Pneumovax	41
Smoking	34
Composite	10

Was there measured improvement?

	2003 (%) Baseline	2005 (%) Post- Intervention
Time to treat	69	69
Blood cultures	71	72
Pneumovax	41	61
Smoking	34	72
Composite	10	40

Was there measured improvement?

	2003 (%) Baseline	2005 (%) Post- Intervention	2008 (%) Current
Time to treat	69	69	75
Blood cultures	71	72	84
Pneumovax	41	61	91
Smoking	34	72	87
Composite	10	40	69

Reflection and Learning

What did I notice?

- Some measures reached 90-100% reliability
- Others were only able to reach 80% consistently
 - Complex patient situations did not always fit performance measures or guidelines
 - Probably shouldn't reach 100%
- Some improvement interventions are embraced and sustained while others are resisted

**How did I make sense of
this?**

Commission on the
Future of Health Care
in Canada



Commission sur
l'avenir des soins de santé
au Canada

DISCUSSION PAPER NO. 8

Complicated and Complex Systems: What Would Successful Reform of Medicare Look Like?

by

Sholom Glouberman, Ph.D.

Baycrest Centre for Geriatric Care

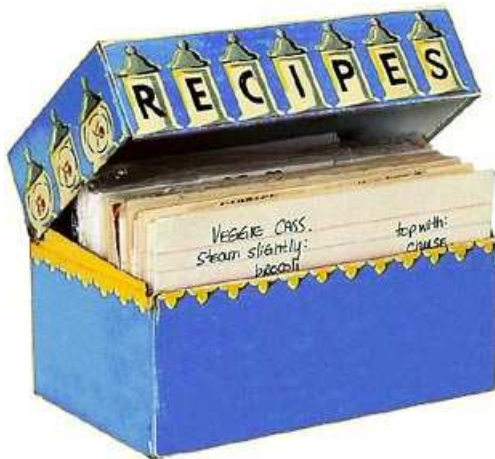
Brenda Zimmerman, Ph.D.

York University



July 2002

Three Different Problems



Simple
Following a recipe



Complicated
**Sending a rocket
to the moon**



Complex
Raising a child

From: Glouberman S, Zimmerman B. Complicated and Complex Systems: What would successful reform of Medicare look like? Discussion Paper No. 8. Commission on the Future of Health Care in Canada. July 2002.

Different care processes for CAP

	Simple “All or Never” “Yes or No”	Complicated “If/Then”	Complex “Relational/Maybe”
CAP Care Process	<ul style="list-style-type: none"> •Vaccinations •Smoking cessation counseling •Obtaining vital signs and oxygenation status •Blood cultures 	<ul style="list-style-type: none"> •Antibiotic timing •Selection of appropriate antibiotics •Ideal location of hospitalization •Blood cultures 	<ul style="list-style-type: none"> •Antibiotic timing •Patients with multiple presenting illnesses or conflicting co-morbidities that do not fit the available scientific evidence or performance measures

Different care processes and improvement interventions for CAP

	Simple “All or Never” “Yes or No”	Complicated “If/Then”	Complex “Relational/Maybe”
CAP Care Process	<ul style="list-style-type: none"> •Vaccinations •Smoking cessation counseling •Obtaining vital signs and oxygenation status •Blood cultures 	<ul style="list-style-type: none"> •Antibiotic timing •Selection of appropriate antibiotics •Ideal location of hospitalization •Blood cultures 	<ul style="list-style-type: none"> •Antibiotic timing •Patients with multiple presenting illnesses or conflicting co-morbidities that do not fit the available scientific evidence or performance measures
Improvement Interventions	<ul style="list-style-type: none"> •Forcing functions •Checklists 	<ul style="list-style-type: none"> •Standard admission orders, algorithms •Care pathways 	<ul style="list-style-type: none"> •Increase provider autonomy •Strengthen patient-provider relationships •Provide space and time to providers and patients

The Challenge

- Match improvement interventions and performance measures with the type of problem or reality that exists
 - Properly matched interventions will be more likely to be embraced
- The goal for all performance measures should not be 100%

My conclusions and future plans

- Personal involvement and reflection on the design and implementation of the improvement interventions helped develop these ideas
- Further refine the typology and the clinical applicability in diverse settings and other improvement interventions

My conclusions and future plans

- Involvement with the LPMR program has given me numerous opportunities to advance my academic career and completely changed the way I approach clinical care, teaching, and research
 - Evidence Based Order Set committee working on the development and implementation of new evidence based order sets throughout the institution
 - DHMC Translational Science award to investigate and treat steroid induced hyperglycemia
 - Assistant Program Director and coach for the LPMR program
 - Involvement with multiple improvement efforts through resident's practicum projects
 - Teaching about quality and improvement on the inpatient medicine wards for medical students and residents
 - Mentor for multiple internal medicine residents' research and improvement projects
 - Multiple publications and presentations related to teaching and improvement work
 - First author for "Improving the simple, complicated, and complex realities of community-acquired pneumonia" submitted for publication in QSHC
 - Expert panel to develop and review MCAP criteria
 - Intern selection committee for internal medicine residency program
 - NH DHHS state grant to improve the delivery of smoking cessation in the inpatient setting