Leading an Interior Health Emergency Department in Implementation of an Electronic Medical Records System

Dr. Anders Ganstal
Chief, Department of Emergency Medicine
Royal Inland Hospital

Interior Health

"Because Our *Documentation* Matters"

Patient Experience at Royal Inland Hospital Emergency Department

Interior Health
Emergency/Outpatient Record

Royal Inland Hospital
ED KAMRIHED Clk: MUET

MRN:
Serv.Date/Time: 10:09

HCN:
INS 1:
INS 1:
INS Exp Date:

Other Phone:
Other Names:
Current Address From:
Employer:
Inst From:
Physician Fee Collected: Pending

MEDS ☐ See Med Rec form ☐ None ☐ Unknown

ALLERGIES ☐ None Stated ☐ See ADR ☐ Unknown

ORDERS

EMERGENCY PHYSICIAN

REASSESSMENT

FINAL DIAGNOSIS

ICD 10 CODE

PHYSICIAN SIGNATURE

☐ SEE PROGRESS NOTE

EMERGENCY PHYSICIAN

MEDICAL RECORDS

Interior Health

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RIH ED EMR Project: April 12, 2016

Interior Health ~ Royal Inland Hospital ~ Kamloops / Ph: 250-374-5111

Name:

MRP:	Age:	Type: REG ED	Acct:
FamPhy	DOB:	Loc: KAMRIHEDST	MedR
MOST:	Sex:	ADM: 30/11/15	**HC#:**
	Ph: 4	DIS:	

Attn:

Emergency Department Note
Signed

PHYSICIAN ASSESSMENT TIME
11:04 a.m.

IDENTIFICATION
This presented to the Royal Inland Hospital Emergency Department complaining of:
Shortness of breath

HISTORY OF PRESENT ILLNESSES
Well until the past 4 days. Developed a horrible cough. Productive of sputum that is green, brown with no blood. Gradual worsening shortness of breath. This morning symptoms were quite bad when doing housework.

REVIEW OF SYSTEMS
Some fever on and off. No nausea or vomiting. Query a bit of chest pain. Only when coughing. Query some tightness of the chest. Worse on exertion. No pleuritic chest pain. Mild bilateral leg edema. Mild worsening of orthopnea. No abdominal pain. Normal bowels and normal urine

PAST MEDICAL HISTORY
1.COPD. No home oxygen. 58 pack-year history of smoking. Pulmonary function tests done in 2015 showed moderate to severe COPD with FEV1 52% of predicted.
2. Atrial fibrillation. On digoxin, warfarin, Lasix, Bisoprolol.
3. Hematuria. Normal cystoscopy with Dr. Ottem in 2012.
4. CHF. No recent echo.
5. Colon cancer. Normal colonoscopy with Dr. Barton.

MEDICATIONS
See medication reconciliation.

ALLERGIES
None

SOCIAL HISTORY

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Page 1 of 2 Destination: *

Name: Emergency Department Note Acct.
MedRec: I

Lives in her own home. No longer smokes.

FAMILY HISTORY
nil of note

EXAMINATION
Temperature 36.1°, pulse 80, resp rate 26, blood pressure 140/76, O2 sats 80% on room air.
Moderate increased work of breathing. Normal color. Alert and oriented.
mucous membranes dry.Normal heart sounds and pulse. No murmur or rub. JVP 6 cm above the sternal angle. Chest is tight. Poor air entry bilaterally. Diffuse wheeze. Abdomen soft and nontender. Legs show minimal pedal edema.

INVESTIGATIONS
White blood cell count elevated at 17.0. CBC otherwise normal. Normal electrolytes. Creatinine elevated at 119. GFR decreased at 37. BNP elevated at 494. Digoxin level high at 3.0. INR 5.6. EKG shows atrial fibrillation with no ST or T-wave changes. Chest x-ray shows right lower lobe infiltrate.

COURSE IN ED
Given Solu-Medrol 125 mg IV, ceftriaxone 2 g IV, azithromycin 500 mg IV, Atrovent and Ventolin puffers.

REASSESSMENT
Oxygen saturations still quite low. 82% on room air. Feels better and looks better.

IMPRESSION
1.Pneumonia/acute exacerbation of COPD. Oxygen saturations quite low. Stable enough for the floor.
2. Elevated INR
3.Acute kidney injury, likely pre renal.
4. Elevated digoxin.
FINAL DIAGNOSIS
Pneumonia.

PLAN
Admit to the hospitalist service. Continue her antibiotics, steroids, bronchodilators. Gentle rehydration. Hold warfarin. Hold digoxin. Code status most C0

DISPOSITION TIME
3:15 p.m.

Created by:

Copies
Report: 1001-0001

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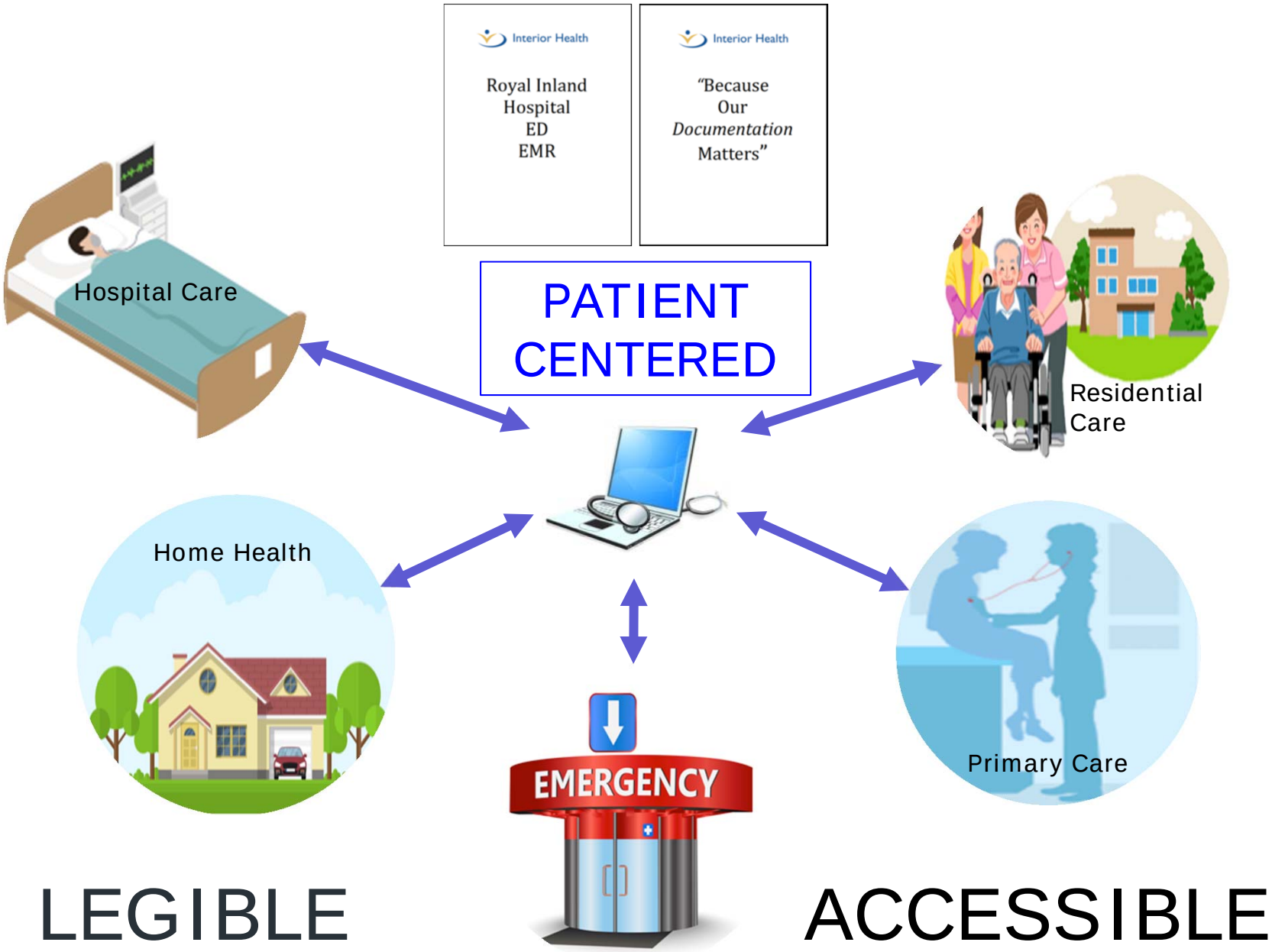
Interior Health
Royal Inland Hospital ED EMR
Interior Health
"Because Our *Documentation* Matters"
PATIENT CENTERED
Hospital Care
Residential Care
Home Health
Primary Care
EMERGENCY
LEGIBLE
ACCESSIBLE

85% of RIH Staff Agree!

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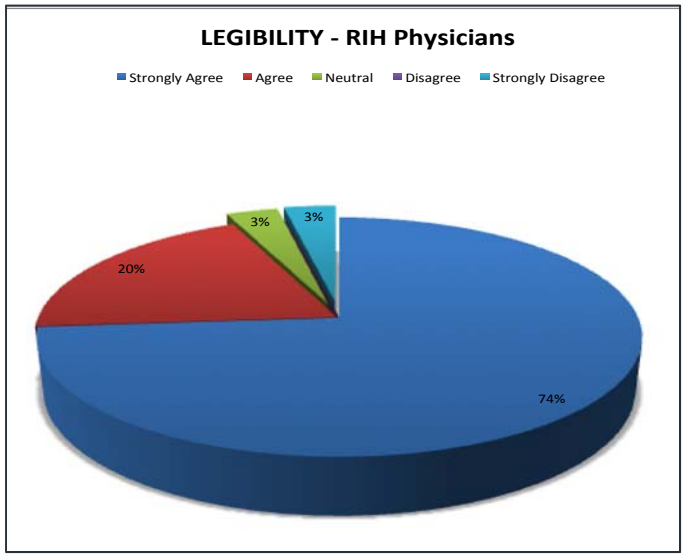
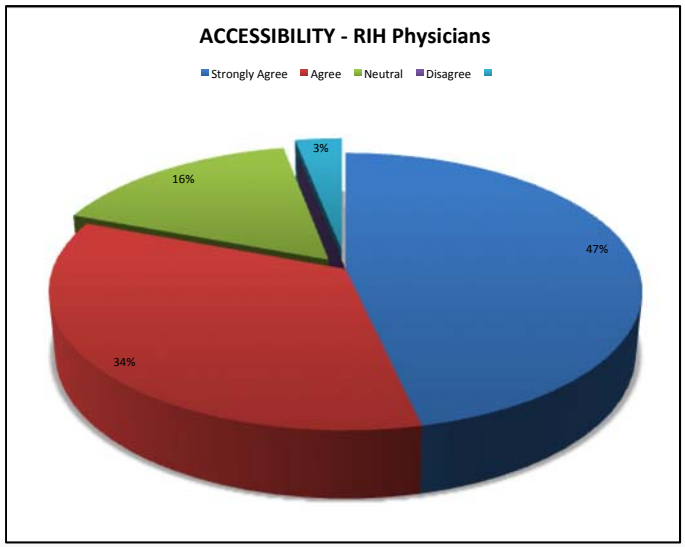


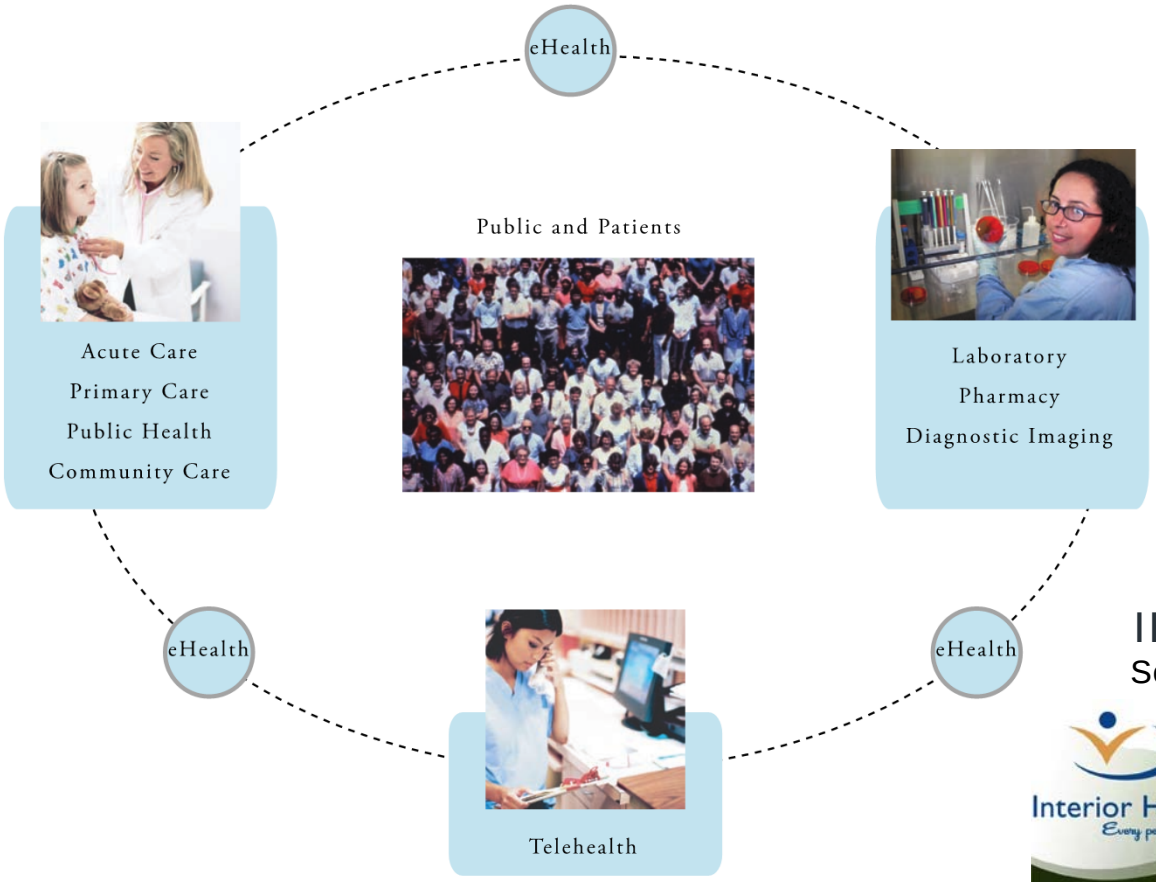


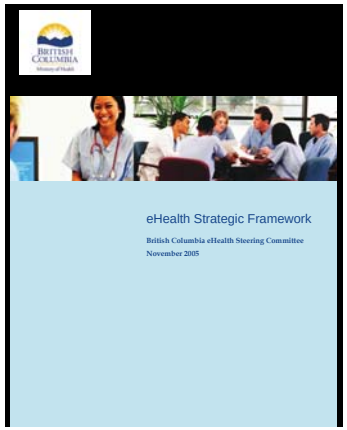
FAX From GP

"The note you sent on my patient was awesome, legible, to the point, and very helpful"

RIH ED EMR Aligns Provincially: eHealth Strategic Framework 2005

A 10 Year Target





Canada Health Infoway
Inforoute Santé du Canada

"Healthier Canadians through innovative digital health solutions"

IHA Strategic Direction

Setting New Standards of Excellence

Interior Health

Royal Inland Hospital
ED
EMR

Patient Centered and Responsive

BC Ministry's Strategic Health Plan 2014 -2017

Meet Population and Patient Health Needs

- Staying Healthy
- Getting Better
- Living with Illness or Disability
- Coping with End of Life

GOALS

- Supporting the Health and Well-being of B.C. Citizens
- Delivering a System of Responsive and Effective Health Care Services for Patients across B.C.
- Ensuring Value for Money

PRIORITIES

- Provide Patient-Centred Care
- Prevention and Health Promotion
- Primary and Community Care
- Improve Access to Specialist Services
- Access to Quality Diagnostic Services
- Access to Clinically- and Cost-Effective Pharmaceuticals
- Review and Improve Acute Care Services
- Appropriate Residential Care

ENABLING STRATEGIES

- Shared Plan of Action
- Clear Accountability
- Ensure Quality
- Skilled Change Management
- Health Human Resources Strategy
- Information Management and Technology
- Budget Management and Efficiency

Acceptable, Appropriate, Accessible, Safe, Effective

BC PATIENT SAFETY & QUALITY COUNCIL

BC Health Quality Matrix

DIMENSIONS OF QUALITY

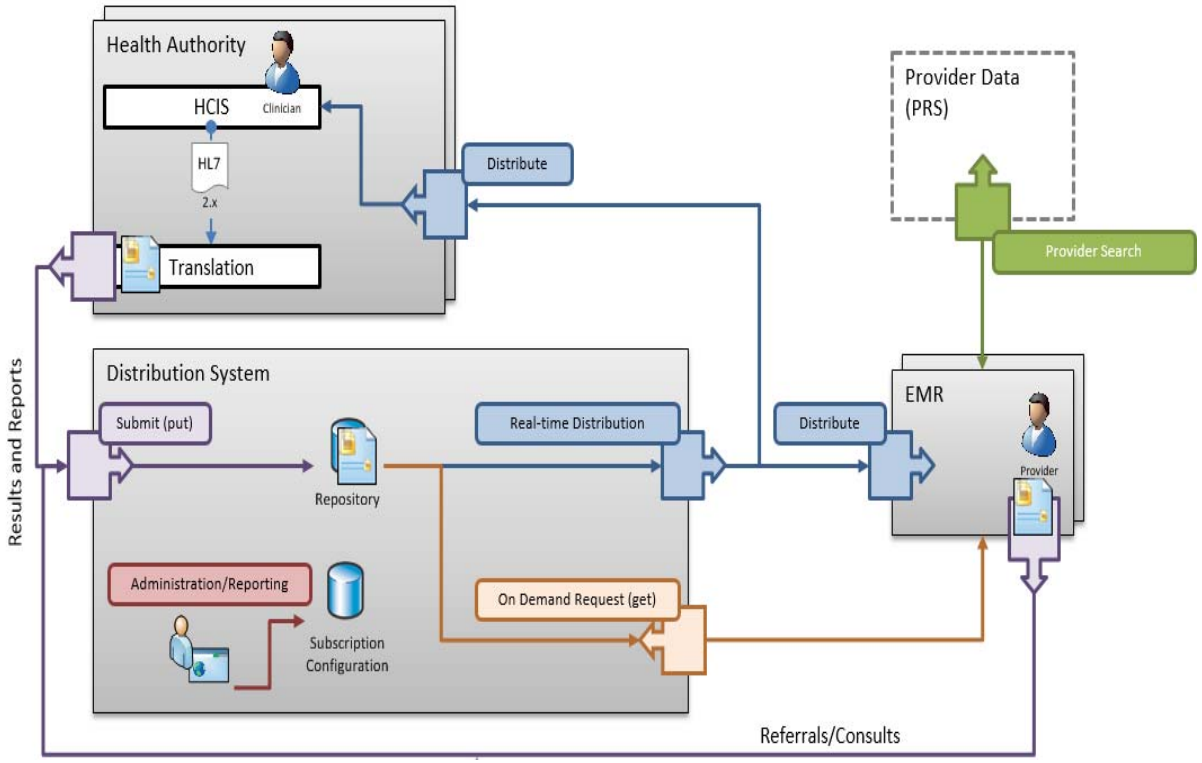
AREAS OF CARE	ACCEPTABILITY Care that is respectful to patient and family needs, preferences, and values	APPROPRIATENESS Care provided is evidence based and specific to individual clinical needs	ACCESSIBILITY Ease with which health services are reached	SAFETY Avoiding harm resulting from care	EFFECTIVENESS Care that is known to achieve intended outcomes
STAYING HEALTHY Preventing injuries, illness, and disabilities	Identification of potential **community intervention** strategies via EMR		Improved ability for **collaborative** care		Save on: • Cost • Time • Space
GETTING BETTER Care for acute illness or injury	**Timely access** to ED chart	**Clear communication** of patients' ED illness and treatment		Decreased **medical errors** due to improved legibility of ED Chart	1. Satisfaction Survey 2. Performance Measures
LIVING WITH ILLNESS OR DISABILITY Care and support for chronic illness and/or disability	Improved patient **privacy**				
COPING WITH END OF LIFE Planning, care and support for life-limiting illness and bereavement[4]					

EQUITY Distribution of health care and its benefits fairly according to population need

EFFICIENCY Optimal use of resources to yield maximum benefits and results

DIMENSIONS OF QUALITY

Clinical Document eXchange



IMPROVED

Care

Privacy

Collaboration

INSTANT ACCESS

By Any EMR System to the ER Chart

IMPLEMENTATION

STAFF
Engagement

FRONT LINE
OWNERSHIP

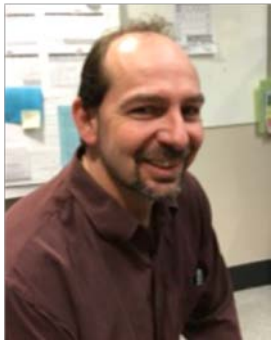
Persuasion

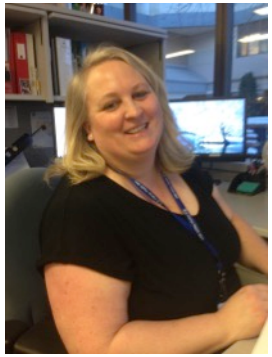
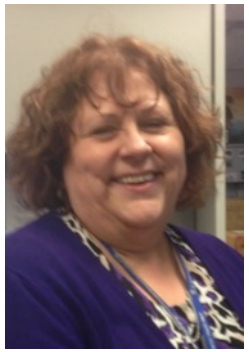
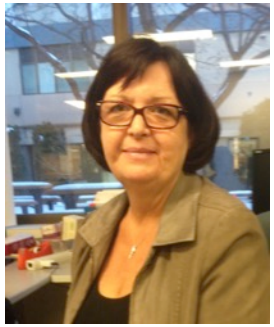
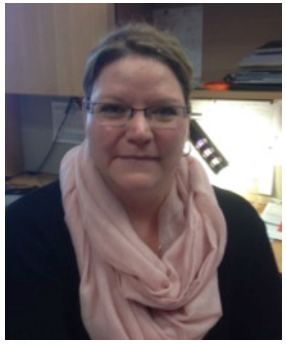
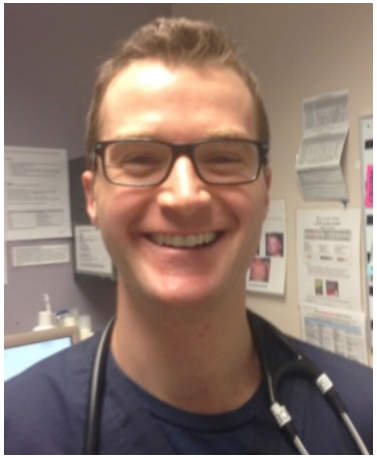
Expert Opinions
Social Proof
Voluntary “Superusers”
Opportunity
Reciprocity

Mitigation

Software & Hardware
Funding & Support
How? When?
Performance Measures
Sustainability

EMR Team



Steering Committee – 10
Physician Superusers – 12
EMR Design Team – 7
Pharmacy – 10
Data analysis
ER Department Renovations

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Royal Inland Hospital
ED
EMR

Minimize the "Valley of Despair"

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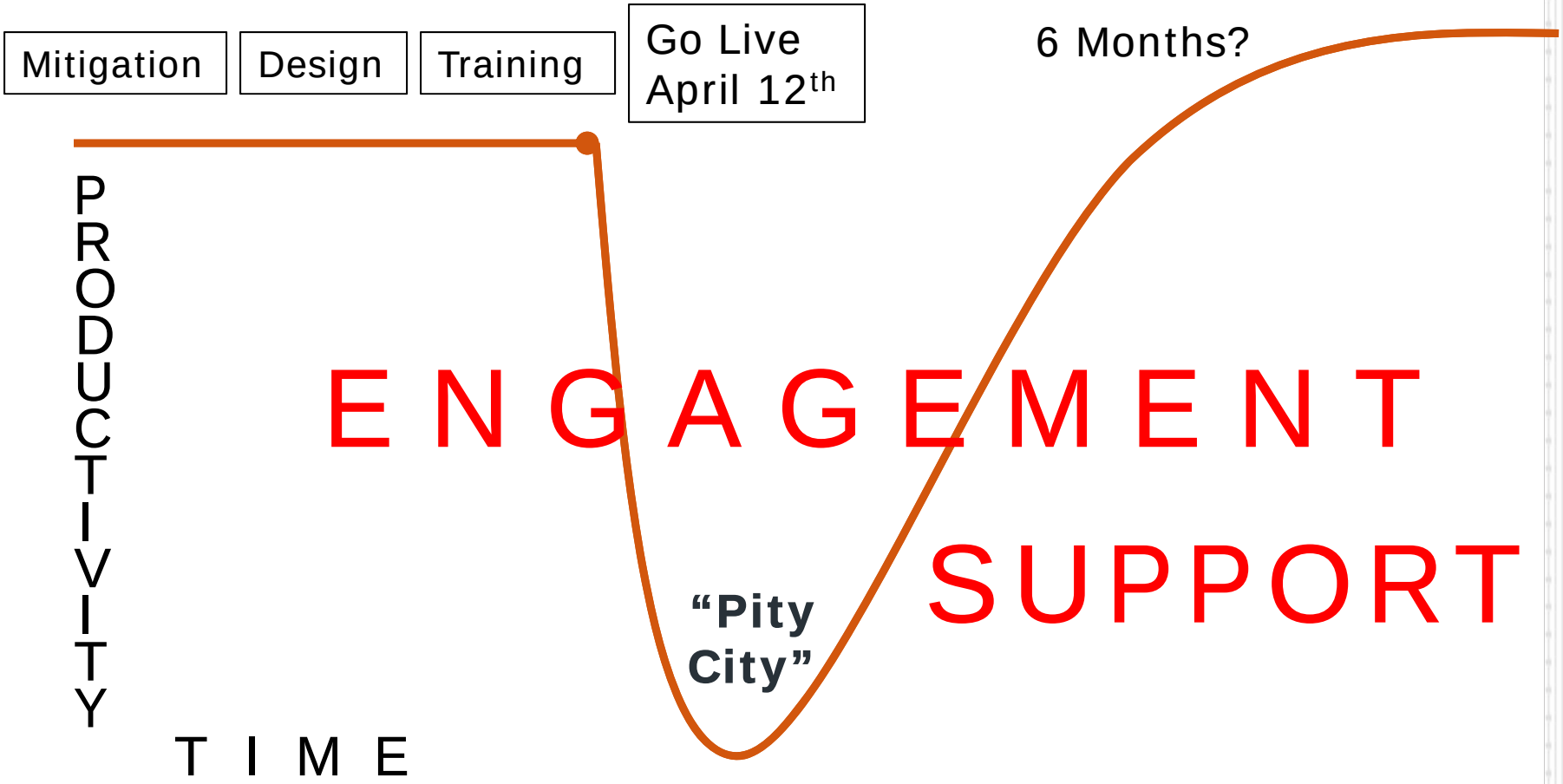

"Tell the Story to Unleash *Maximum Energy* for Change"

Dr. Spencer Brown, Physician Lead
"I am feeling ever more confident that we can make this system work. Mostly because the team working on it is pretty awesome."

1. Interior Health
   - ER Staff
   - Hospital Staff - MAC, Departments
   - Hospital Admin - Quality Committee
   - Board of Directors
2. Kamloops Community - PVN

patientvoices NETWORK

3. Ministry
   - Health, Hon. Terry Lake
   - Transportation, Hon. Todd Stone

4. EMR Position Paper 2016

Section of EMERGENCY MEDICINE
British Columbia Medical Association

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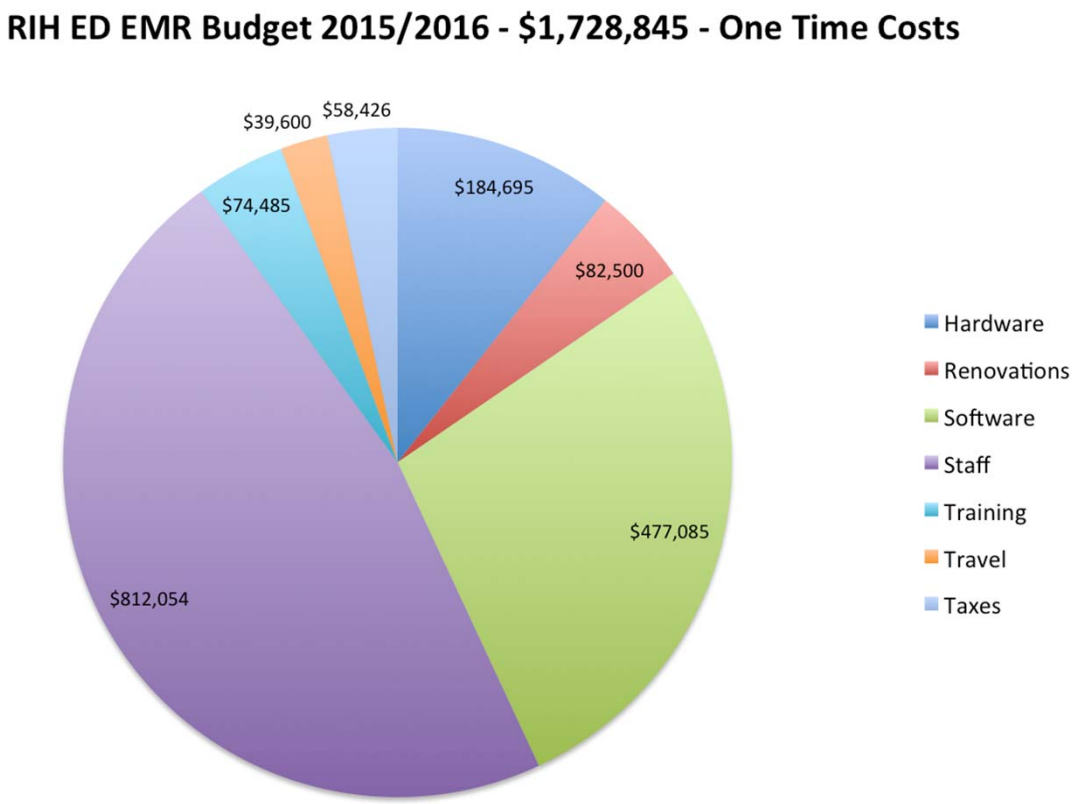
EMR Efficiency/Effectiveness

- 5 Performance Measures
  - 3 month data span: pre, post 6 wk, 6 mo, 18 mo.

1. Average length of stay for ED patients
2. Number of patients left without being seen
3. Triage time to physician initial assessment
4. Time from physician initial assessment to disposition
5. Average number of patients seen by physician/hour
6. Medical Errors

- Satisfaction Survey pre/post
- Physician Feedback

RIH ED EMR COST



EMR SAVINGS

- ER supplies – paper ($7500/yr – labs printing)
- 8500 hours Filing (Unit Clerk & Health Records)

Sustainability

- $305,000/year x 5 years
  - 24/7 Support
  - Training
  - Soft & Hardware Updates
- Ongoing Staff Engagement

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Royal Inland Hospital
ED EMR

PATIENT CENTERED

MITIGATION

FUNDING

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THANK YOU