

Quality Improvement Research at Indiana/Regenstrief

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Questions to be answered

- What types of QI projects have you done?
 - research focus
 - context
 - collaborators
 - audience

QI research projects performed

- Geriatrics
 - RCTs of care management
 - Ø depression
 - Ø dementia
 - Ø frail community-living elders
 - Ø renal insufficiency
 - Ø CDSS – suggestions for cognitively impaired elders

QI research projects performed

- Geriatrics
 - RCTs of care management
 - Ø depression
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 - Ø renal insufficiency
 - Ø CDSS – suggestions for cognitively impaired elders
 - prospective cohort study
 - Ø multidisciplinary weight management program

QI research projects performed

- Geriatrics
 - RCTs of care management
 - Ø depression
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 - Ø frail community-living elders
 - Ø renal insufficiency
 - Ø CDSS – suggestions for cognitively impaired elders
 - prospective cohort study
 - Ø multidisciplinary weight management program
 - retrospective cohort study
 - Ø EMR vs. chart audit for quality indicators

QI research projects performed

- Geriatrics
- General Internal Medicine
 - RCTs
 - ∅ CDSS – preventive care suggestions (tests, Rx)
 - ∅ CDSS – drug monitoring tests
 - ∅ CDSS – care sugg: CAD/CHF, RAD, HTN, depress.
 - ∅ CDSS – care suggestions for chronic severe pain
 - ∅ CDSS – self-management of post-stroke depression
 - ∅ community-based suggestions for CHF, diabetes
 - ∅ comprehensive management of patients CRI

QI research projects performed

- Geriatrics
- General Internal Medicine
 - RCTs
 - prospective cohort studies
 - ∅ comprehensive glucose management post-stroke
 - ∅ effects of introducing pain score as a vital sign
 - ∅ outcomes of HIV/AIDS care in Kenya
 - ∅ effects of medication adherence on outcomes of HIV/AIDS care in Kenya

QI research projects performed

- Geriatrics
- General Internal Medicine
 - RCTs
 - prospective cohort studies
 - retrospective cohort studies
 - Ø predictors of cardiovascular outcomes
 - Ø risk factors for developing renal insufficiency
 - Ø predictors of cost in inpatients
 - Ø predictors of mortality in chronic heart, lung disease

QI research projects performed

- Geriatrics
- General Internal Medicine
 - RCTs
 - prospective cohort studies
 - retrospective cohort studies
 - crosssectional studies
 - Ø values, barriers, and facilitators affecting quality of care among multiple staff in a large urban hospital
 - Ø equity in HIV/AIDS research in Kenya
 - Ø prevalence, correlates of alcohol abuse in Kenya

Questions to be answered

- What types of QI projects have you done?
- How do you approach QI research?
 - methods
 - measures
 - infrastructure

Approaches to QI research

- **Methods**

- **RCTs**

- ∅ default → use whenever possible

- ∅ most rigorous, least biased method

- ∅ most difficult, time-consuming, and expensive

- ∅ usually (but not always) require external funding

Approaches to QI research

- Methods
 - RCTs
 - prospective cohort studies
 - Ø easier, less time-consuming, less expensive
 - Ø confounded by other changes in practice, medicine
 - Ø can choose the most cogent measures

Approaches to QI research

- Methods

- RCTs

- prospective cohort studies

- retrospective cohort studies

- ∅ even easier, least expensive, least time-consuming

- ∅ rely on measures in everyday care, management

- ∅ severe observational biases

- ∅ good for understanding patterns of disease, care

- ∅ good for generating hypotheses

Approaches to QI research

- Methods
 - RCTs
 - prospective cohort studies
 - retrospective cohort studies
 - crosssectional studies
 - ∅ used for qualitative research
 - ∅ snapshot in time
 - ∅ difficult to make firm conclusions
 - ∅ not likely generalizable
 - ∅ often locally actionable

Approaches to QI research

- Methods
- Measures
 - from EMR
 - Ø utilization
 - Ø drugs
 - Ø diagnostic test results (numeric, coded)
 - Ø vital signs
 - Ø costs (charges)

Approaches to QI research

- Methods
- Measures
 - from EMR
 - from questionnaires
 - ∅ data not in EMR (personal data, medical history)
 - ∅ symptoms
 - ∅ health-related quality of life
 - ∅ functional status
 - ∅ satisfaction with care
 - ∅ preferences

Approaches to QI research

- Methods
- Measures
 - from EMR
 - from questionnaires
 - from interviews (focus groups, semi-structured)
 - Ø opinions
 - Ø experiences
 - Ø suggestions
 - Ø wants, desires

Approaches to QI research

- Methods
- Measures
- Infrastructure
 - practice-based research networks (IN, Kenya)

Primary Care Center

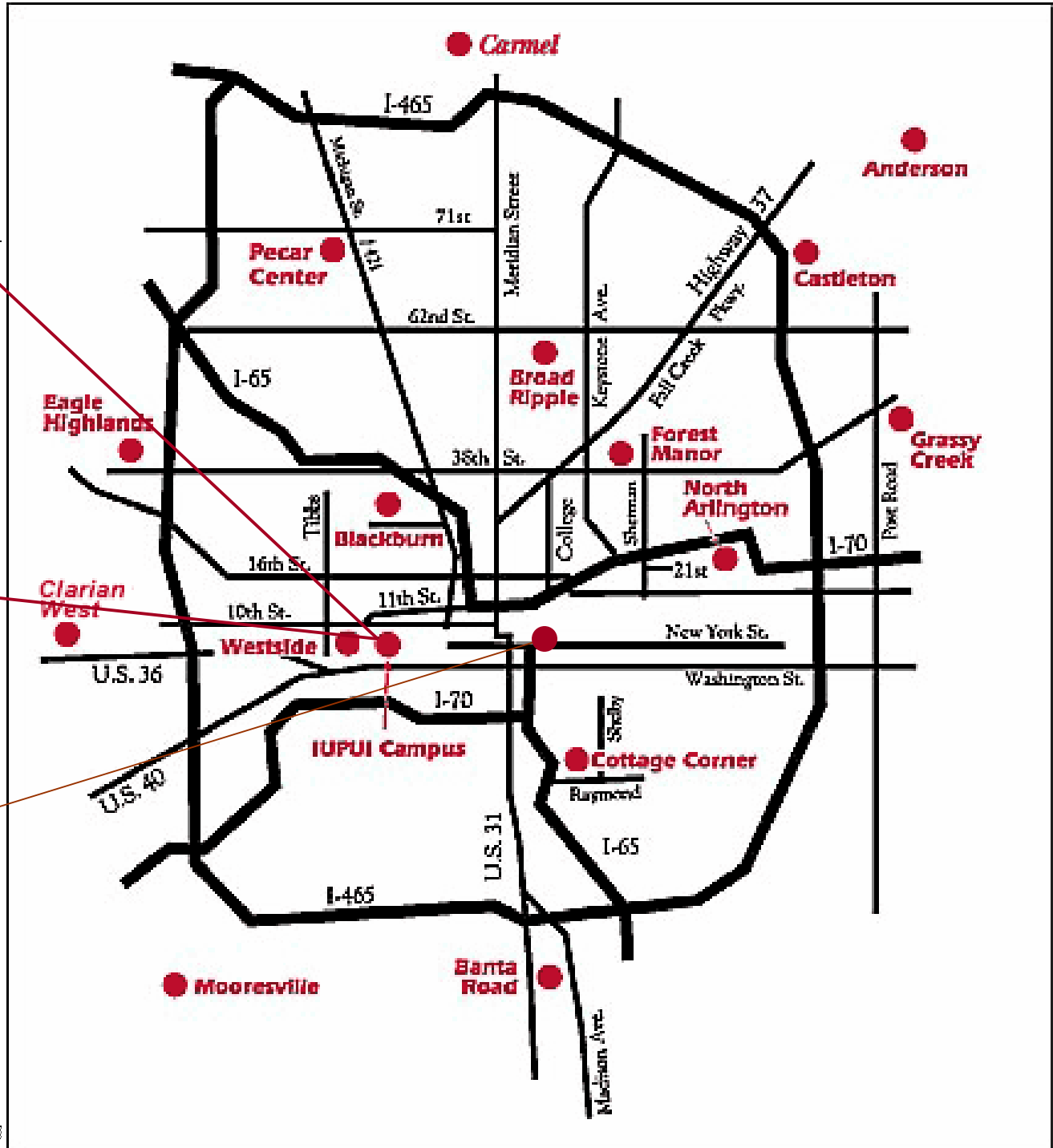
- Firms A and B
- Main Floor Comm.

MDC-IU Hospital

Roudebush VAMC

- GMCs

Horizon House





Approaches to QI research

- Methods
- Measures
- Infrastructure
 - practice-based research networks (IN, Kenya)
 - inner-city public teaching hospital med. service
 - comprehensive EMR, additional data sources
 - city-wide network → data, collaboration
 - health information exchange → lab/imaging/hospital data, documents → communication
 - clinical leadership committed to research

Questions to be answered

- What types of QI projects have you done?
- How do you approach QI research?
- What QI approaches have been successful?
 - differ by QI target?
 - differ by context?
 - ∅ site
 - ∅ population
 - ∅ outcomes needing to be changed

Successful QI approaches

- By QI target
 - CDSS works for preventive care
 - multidisciplinary care management can work for complex patients and conditions, but it has a moderate marginal cost-effectiveness
 - qualitative research (especially appreciative inquiry) works and is probably underutilized

Successful QI approaches

- By QI target
- By context
 - site
 - ∅ we have limited variability → most research done in our PBRN in Indianapolis or Kenya
 - ∅ hospital sites and QI problems have been understudied

Successful QI approaches

- By QI target
- By context
 - site
 - population
 - ∅ chronically ill older adults, esp. w/behav-psych d/o
 - ∅ inner-city primary care patients

Successful QI approaches

- By QI target
 - By context
 - site
 - population
 - outcomes to be changed
 - ∅ preventive care testing/interventions
 - ∅ utilization/costs
 - ∅ patient satisfaction
 - ∅ behavioral/psychiatric outcomes
 - ∅ health-related quality of life
- } Older adults

Questions to be answered

- What types of QI projects have you done?
- How do you approach QI research?
- What QI approaches have been successful?
- **What additional research is needed?**

Additional QI research needed

- How to incorporate health-related quality of life and symptom measures into care and QI assessments
 - these are the outcomes that matter to patients
 - they are measurable, and the measures are as reproducible as many other accepted measures
 - we don't know many clinically important differences
 - clinician education has rarely focused on how to obtain and use such information in everyday care

Additional QI research needed

- How to incorporate health-related quality of life and symptom measures into care and QI assessments
- How to engineer CDSS tools so MDs will use them
 - incorporated into the flow of care
 - double-dip → part of (e)chart, minimal extra work
 - right information to right clinician at the right time
 - easy to respond in a meaningful way
 - engineered to be personal → self-reminders

Additional QI research needed

- How to incorporate health-related quality of life and symptom measures into care and QI assessments
- How to engineer CDSS tools so MDs will use them
- Identify better QI research, P4P outcomes so we don't "look for our keys under the lamppost" and reflect different perspectives (provider, patient, employer, insurer, policymaker)
 - what matters to whom?
 - quality of caring is often as important as quality of care

Additional QI research needed

- How to incorporate health-related quality of life and symptom measures into care and QI assessments
- How to engineer CDSS tools so MDs will use them
- Identify better QI research, P4P outcomes so we don't "look for our keys under the lamppost" and reflect different perspectives (provider, patient, employer, insurer, policymaker)
- Develop effective QI research methods
 - when RCTs are not possible

Additional QI research needed

- How to incorporate health-related quality of life and symptom measures into care and QI assessments
- How to engineer CDSS tools so MDs will use them
- Identify better QI research, P4P outcomes so we don't "look for our keys under the lamppost" and reflect different perspectives (provider, patient, funders of care)
- Develop effective QI research methods
- Develop appropriate measures of costs
 - perspective (e.g., patient, payer), distribution (skew)

A blue-footed booby is the central focus of the image, standing on a dark, porous volcanic rock. The bird has a white body, dark wings, and a distinctive blue patch around its eye. Its most striking feature is its large, bright blue webbed feet. The background consists of a rocky, brownish ground with some sparse green vegetation and dry twigs. A light blue speech bubble with a black border is positioned above the bird's head, containing the text "Any questions?".

Any questions?