

A Partnership Approach to Evaluation of the Implementation of a Large Natural Experiment

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Background

- RCTs are good for simple interventions, but:
 - High cost, atypical subjects, & practice intrusion
 - Lack external validity & generalizability
 - Can't learn about implementation
- Alternative designs & subject recruitment
 - Observational studies of natural experiments
 - Recruitment from claims data & EMRs
 - Partnerships needed



Agenda

- A spontaneous statewide initiative to improve primary care of depression
- A partnership observational study of that natural experiment that is scientifically rigorous & utilizes alternative subject recruitment
- Some early lessons



Problems in the Primary Care of Major Depression

- Usual care minimally effective
- Collaborative care model proven
(Care manager, MH collaboration, measurement, registry, follow-up)
- But that model hasn't been implemented or spread



A Natural Experiment

7/06 - DIAMOND Initiative

“Depression Improvement Across Minnesota:
Offering a New Direction”

- Payers agreed to new payment system
- Clinics agreed to new care approach
- ICSI facilitated it all



DIAMOND Implementation

- 85 clinics implemented in 5 sequences from 9/07-3/10 (14-18 every 6 months after 6 months training)
- Currently 64 clinics with 417 FTE of PCPs
- 8,000 patients activated as of 6/11
- Steering committee + evaluation and QI

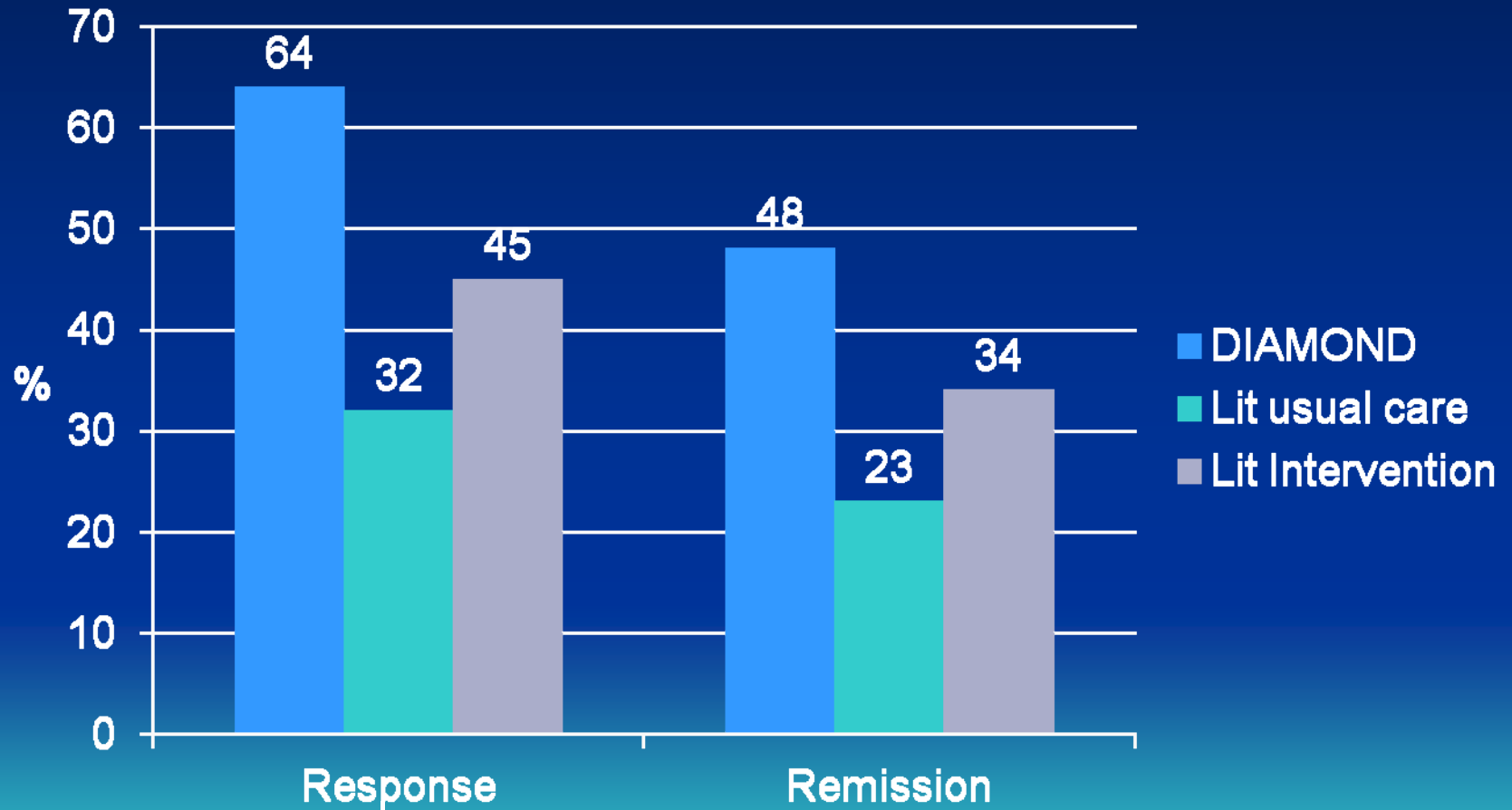


Initiative Evaluation

- Process measures
 - Care manager panel size = 136
 - PHQ9 use:
 - Baseline – 63% of depressed patients
 - Follow-up (within 30 days): 58% at 6 & 44% at 12 mo.
 - Activation rate = 18% of those eligible
- Qualitative evaluation
 - Periodic conference calls
 - Site visit interviews/analysis



DIAMOND Initiative Outcomes at 6 months



Why do a Study?

The stakeholders wanted to know more:

- What are the other effects on patients?
- Are outcomes better than usual practice?
- What does it cost to implement and operate?
- How well has it been implemented?



DIAMOND Study – A Partnership

- Developed with the Initiative Steering Comm.
- Designed to answer stakeholder questions
- Methods fit with Initiative:
 - Staggered implementation, multiple baseline
 - Study subjects recruited without intruding on care
- All clinics agreed to cooperate
- Funded by NIMH in 9/07
- Conducted collaboratively



Both an Initiative and a Study



DIAMOND Study Proposal

Specific Aims:

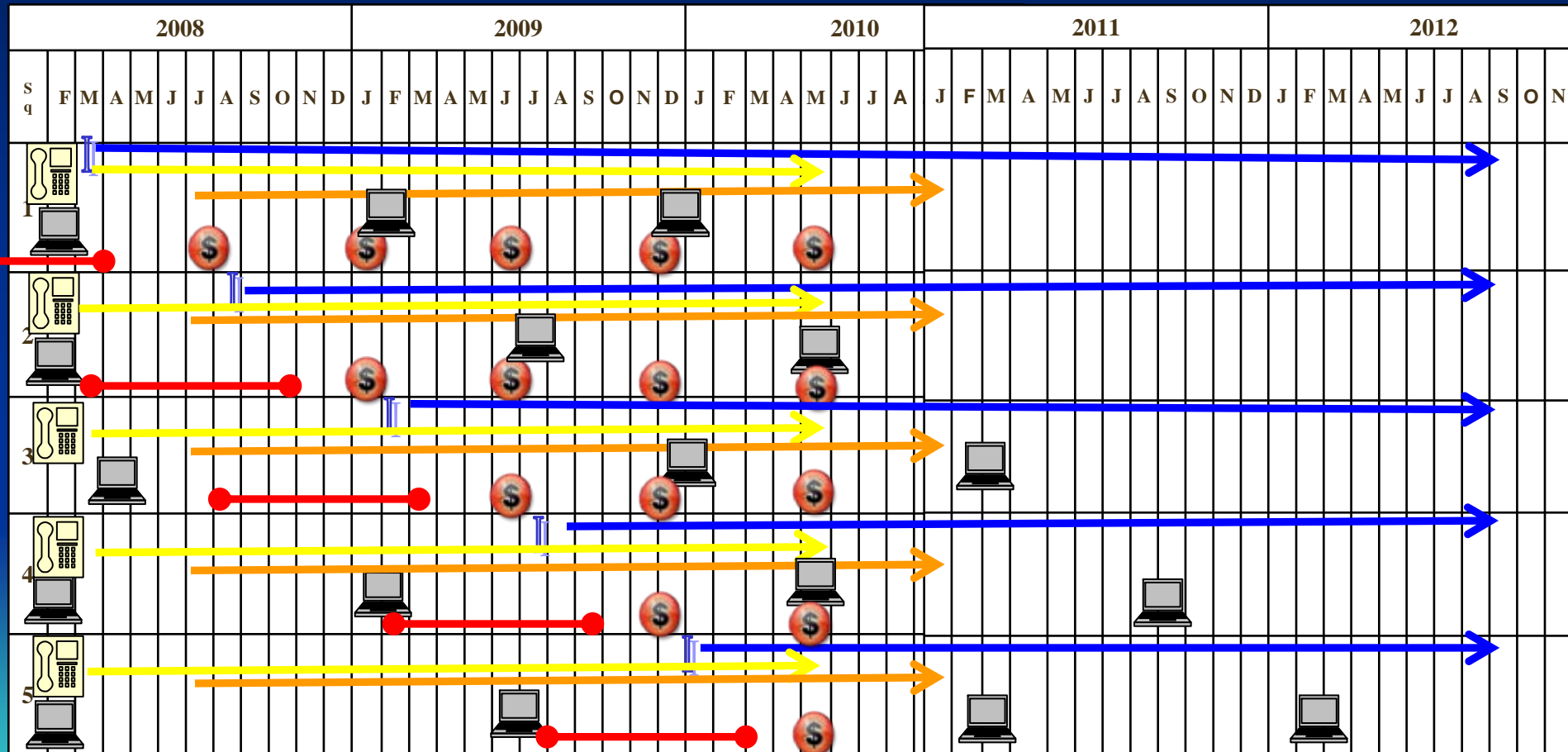
- Test the effects on care received
- Test the effects on depression, satisfaction, productivity & healthcare costs
- Measure implementation and the organizational factors affecting it
- Describe implementation costs, reach, methods, adverse outcomes, adoption, and spread



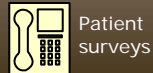
Methods

- Design: Staggered implementation, multiple baseline
- Patient recruitment: health plan claims data
- Measures:
 - Patient surveys at 1 & 6 mos. about care received, dep. severity, QOL, satisfaction, and productivity
 - Claims data on utilization/costs of care
 - Clinic leader surveys of priority, change capability, and care system implementation
 - Payer, clinic, and ICSI implementation costs
 - Clinic operating costs

DIAMOND Study Design



Key: I = Implementation
of New Care Model

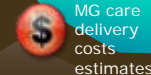


Patient surveys

Yellow line = baseline survey
Orange line = 6 month survey
Red line = MG implementation cost estimate



MG surveys



MG care delivery costs estimates

Patient Recruitment

- Data sent to study team 24,000
 - Incorrect info or not reached - 9,600
- Contacted (60%) 14,500
 - Refused or unable - 5,000
- Screened (66% of contacted) 9,500
 - Ineligible (PHQ9<7, not dep., not DIA clinic, no antidepress.)
- Eligible (26% of screened) 2,435
- Consented (99.7% of eligible) 2,423



Sample Comparisons

Characteristic	Total Sent	Screened	Consented
N	24,000	9,500	2,400
Female	69.5%	70.7%	72.7%
Age (yrs.)	45.6	46.5	44.6
College degree		36.6%	31.2%
Married		53.6%	46.3%
Metro	62.3%	64.8%	64.4%
Medicaid ins.	21.7%	17.2%	25.1%
Post-Implement'n	50.3%	49.8%	51.4%

Clinic Implementation Surveys

- Clinic manager – change capability
- Physician leader – presence of systems
- Pre-impl'n + 1 and 2 years post impl'n
- As of 5/11: 553 surveys sent
 550 completed (99.4%)



Pre-Existing Clinic Systems for Depression Care

- Reported by clinic medical leader before implementing DIAMOND
- 81 clinics reporting
- Asked if a system is:
 - Present and works well
 - Present and needs improvement
 - Absent



DIAMOND Care

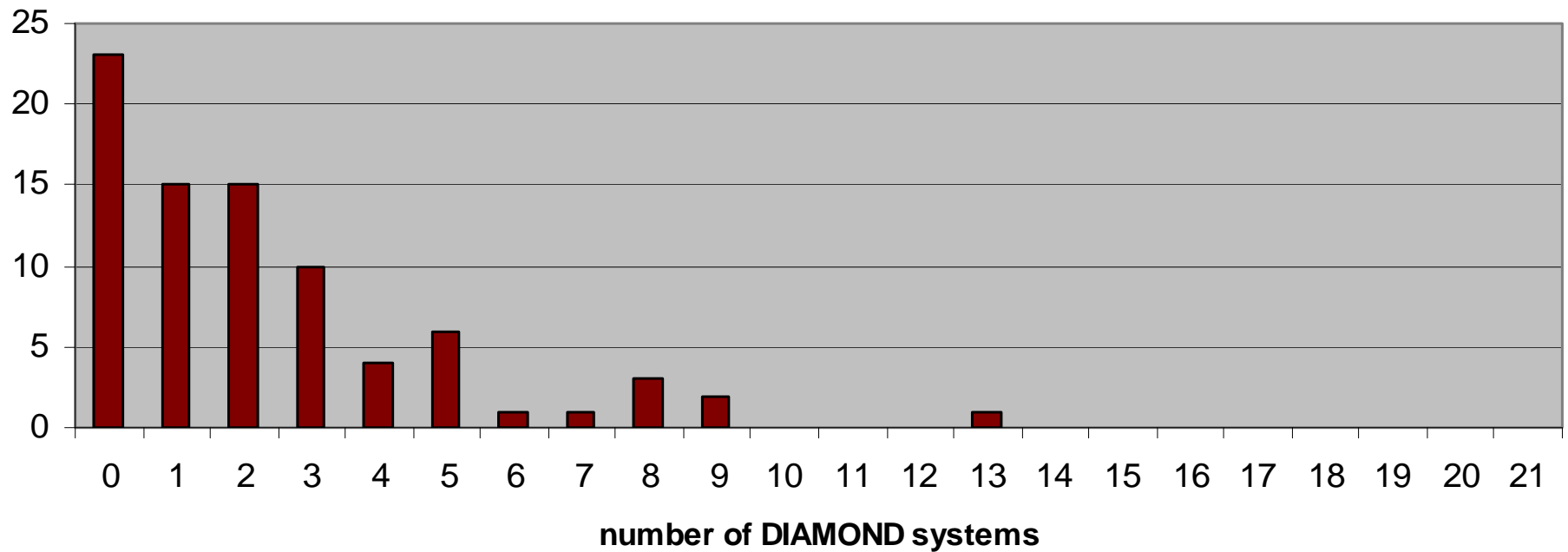
Examples of Systems

	<u>Present, Works Well</u>
• Evaluate for alcohol/chemical problems	16%
• Assure specific depression codes	22
• Depression registry	0
• Measure depression severity regularly	7
• Non-physician resp. for guideline care	9
• After visit follow-up	6
• Follow-up if miss appointments	2
• Relapse prevention plan	1



Clinics with Depression Systems That Work Well

DIAMOND systems in place and work well



Implementation Costs

	Average	Total	Per Pt. Month*
Medical Group	\$45,250	\$860,000	\$29
Payers	21,200	127,400	4
ICSI	263,100	263,100	9
Total		\$1,250,000	\$42

***Per patient per month over 29,500 service months**

Care Delivery Hours & Costs/Month

56 observations in 19 medical groups at 5 points over 2.5 years

Category	Hours	Costs (\$)
Care manager	2.7 (.7-6.1)	91 (32-281)
Consulting psychiatrist	0.2	37
Billing and coding	0.2	6
Registry & IT systems	0.3	9
Supervision	0.2	13
Other salary costs	0.1	2
Other non-salary costs	NA	2
Totals	3.6 (0.9-9.0)	159 (50-402)

Study Lessons

- Partnership research requires the right environment, people, & relationships
- Population-based patient recruitment also requires high activation rates or oversampling
- Many payers and medical leaders really do want to better understand their natural experiments, and will cooperate with data collection that is sensitive to their concerns and provides answers to questions they care about



Questions?

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