

National Conference on Correctional Health Care
Denver October 10-14, 2005

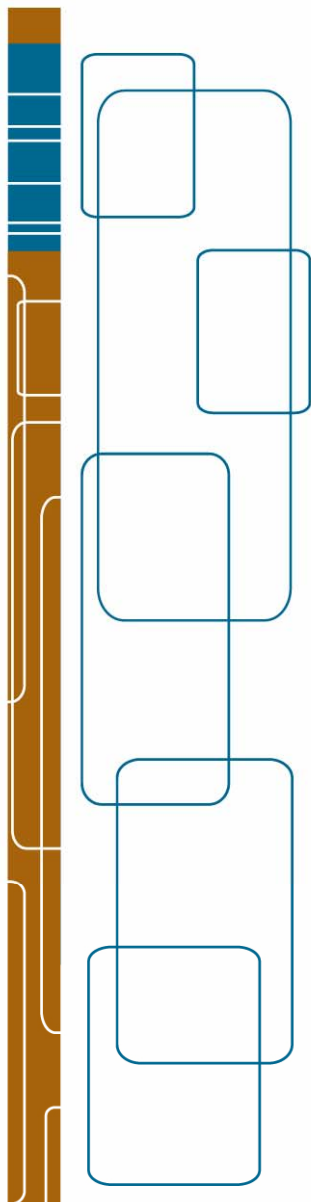


The 3 Pillars of a Correctional Health System Turnaround

Presented by:

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Introduction

- Maricopa County (County Seat-Phoenix) became aware of health delivery problems/issues within the 3rd largest jail system in the country
 - Budget overruns
 - Financial Issues arising from clinical delivery and staffing
 - Clinical and management data reporting
- The County wanted to take quick, decisive action
- It Retained Phase 2 Consulting as interim management/consultant to turn around Correctional Health Services (CHS)
- It appointed attorney/County executive; Lindy Funkhouser, to monitor and assist CHS and Phase 2
- New management quickly assessed and took steps to address issues

Presentation Outline

- An Introduction to Maricopa County Jails & Correctional Health Services
- Three Pillars of a Correctional Health System Turnaround:
 1. Medication Management & Utilization
 - Issues & Problems: Costs and Accountability
 - Solutions: Outsourced Pharmacy Services
 2. Clinical Staffing & Operations
 - Issues & Problems: Agency Costs, Vacancies, & High Cost Care Delivery
 - Solutions: Recruitment & Retention and New Care Model & Staffing Mix
 3. Outside Services Utilization
 - Issues & Problems: High Utilization, High Costs, Transportation, & Arizona State Hospital program efficacy
 - Solutions: Referral Monitoring, Specialty Clinics, & Return to Competency
- And by the Way...
- Lessons Learned

Maricopa County Jails and Correctional Health Services

- Sheriff- Joe Arpaio
 - “America’s Toughest Sheriff”
 - “The public is my boss”
 - Immense popularity
(85% approval rating)
 - Started the nation's largest Tent City for convicted inmates
 - Chain gangs which work six days a week
 - Cheapest meals in the country - average inmate meal costs under 45 cents



**All photographs obtained from public press or public websites*

Maricopa County Sheriff's Office (MCSO)

- Average Daily Inmates 10,550
- 3rd largest jail system in U.S
- Facilities - Jails and tents
 - 4th Avenue
 - Lower Buckeye
 - Towers
 - Durango
 - Estrella
 - Estrella Support
 - Tents:
 - In-Tents, Con-Tents, & Pup-Tents



Lower Buckeye Jail opened April 2005.



Tent City

Maricopa County Sheriff's Office (MCSO)



- Custody Programs
 - Adult Education Program
 - Female Chain Gang (first and only)
 - Girl Scouts Beyond Bars (first jail to initiate)
 - Instituted Community Gleaning Program
 - Jail High School (Hard Knocks High)
 - Job Placement Program (WIRC)
 - Juvenile Chain Gang
 - Licensed Substance Abuse Program
 - MASH Unit for Abused Animals
 - Nationally Recognized Female Alpha Program
 - Pink Underwear
 - Sack Lunches
 - Stripes Program (inmates assisting Elections Department)
 - Vacancy Sign (Sheriff pledges to always have room to book arrested individuals)



Maricopa County Correctional Health Services (MCCHS)

- Correctional Health Facilities
 - Clinics
 - 13 clinics:
 - Estrella Outpatient, Estrella Support, Durango Outpatient, Towers Outpatient, LBJ Outpatient, LBJ Dental, LBJ Imaging, LBJ Psych, LBJ Infirmary, 4th Ave. Outpatient, 4th Ave. Dental, 4th Ave. Imaging, 4th Ave. Intake
 - Medical Infirmary
 - Lower Buckeye Jail Infirmary (60 beds, 6 isolation rooms)
 - Mental Health Infirmary
 - Inpatient Mental Health Unit (264 beds)

Medication Management & Utilization

- Problems:
 - Packaging of medications – baggies & coin envelopes
 - Intensive manpower (LPN) for medication pass
 - Medication selection and usage – low efficacy
 - Contraband
 - Cost and Labor Issues – A concern for the County
 - \$1 Million in Salary & Benefits per year.
 - 8 Full-time Pharmacists and 10 other staff
- Methodology:
 - Compared cost-benefit of three different options:
 - Status Quo (fully manual dispensing process)
 - Automated On-site Dispensing
 - Fully Outsourced Pharmacy Services

Medication Management & Utilization

Methodology:

CHS - Pharmacy - Medication Delivery Cost Comparison

(Excluding Capital Costs & Medication Costs)

NOTE: Analysis Not for Budgeting Purposes

Operating Expenses	Current	Projected LBJ w/ Automation	Outsourced Pharmacy Contract
	FY05-Oct Annualized		
Salaries and Benefits	893,316	1,196,263	327,663 ⁵
Temp Pool Salaries (Dick Coe)	107,580	n/a ²	n/a
Salary & Staffing	1,000,896¹	1,196,263	327,663
Medical Supplies - Other	11,559	12,000	-
General Supplies	8,661	8,661	-
Purchased Services	1,944	1,944	-
Internal Service Fund Charges	6,138	6,138	-
Occupancy Costs	5,298	5,298	-
Other	1,278	1,278	-
Other Subtotal	23,319	23,319	-
Dispensing Fees	-	-	657,060 ⁶
Related Nursing Labor	957,118	957,118	282,707 ⁵
Total Expenditures	\$ 1,992,892	\$ 2,188,700	\$ 1,267,430

Notes:

¹ Source: CHS November Variance Report

² Salary for Temp Pool not applicable

³ 8 Medical Supply Clerk FTE's at \$14.50

⁴ See Rx Estimates for 7 to 15 day script conversion at \$3.40 per prescription

⁵ P2C "CHS_Pharm Cost Savings to Outsourcing.xls" LPN Staffing

Medication Management & Utilization

- Solution: Fully Outsourced Pharmacy Services
 - Issued RFP for Pharmacy Vendor
 - Selected Pharmacy Vendor
 - Utilized blister packs to expand Keep On Person (KOP) program
 - Coordinated electronic reporting with Vendor to manage utilization and reduce errors



New Pharmacy Blister Packs

Clinical Staffing & Operations

- Problems:
 - Recruitment & Retention:
 - Vacancy Rates 55% for RNs; 36% for LPNs
 - Turnover Rates averaging 104%
 - Agency Labor Usage
 - 35% of Total Labor Dollars spent (\$3.1 Million)
 - Clinical Operations
 - 14-Day Evaluations: Cumbersome method for tracking
 - Intake Wait Times: Averaging 20 minutes prior to Intake Assessment
 - Documentation issues: 6 jails, legibility, quality, and accessibility

Clinical Staffing & Operations

- Methodology

- Staffing: Develop a facility specific staffing plan using accepted national standards for healthcare staffing. Define and communicate the roles and responsibilities to staff and implement reporting mechanisms to carry out the designed plan.

- 10 Steps to Optimal Staffing and Scheduling

- Review master patient care plan
 - Develop facility specific staffing plan
 - Determine labor demands by type of clinical personnel needed
 - Create a position control – HR position tracking log
 - Develop plan for excessive personnel vacancies
 - Analyze external staffing needs
 - Reconcile personnel needs with budget
 - Develop a master schedule
 - Create a weekly staffing plan with checks for personnel vacancies
 - Define and communicate the roles and responsibilities of staff
 - EMR: Cost-Benefit Analysis

Clinical Staffing & Operations

- Sample Unit Specific Staffing Plan

Dept. Name: 4th Ave Intake
 Hours per Shift: 8.0
 Intakes: 94,900
 Visit Volume: 260

# CEN	Administration		Professional Staff						Prod Hours	Prod Hrs/ Pt Day
	Nurse		RN			LPN				
	HCA	Supervisor								
	Day	Day	Day	Evening	Night	Day	Evening	Night		
	\$36.00	\$30.66	\$28.24	\$28.24	\$28.24	\$18.64	\$18.64	\$18.64		1.21
263	0.50	1.00	3.00	3.00	3.00	3.00	3.00	3.00	315	1.20
262	0.50	1.00	3.00	3.00	3.00	3.00	3.00	3.00	315	1.20
261	0.50	1.00	3.00	3.00	3.00	3.00	3.00	3.00	315	1.21
260	0.50	1.00	3.00	3.00	3.00	3.00	3.00	3.00	315	1.21
259	0.50	1.00	3.00	3.00	3.00	3.00	3.00	3.00	315	1.21
258	0.50	1.00	3.00	3.00	3.00	3.00	3.00	3.00	315	1.22
257	0.50	1.00	3.00	3.00	3.00	3.00	3.00	3.00	315	1.22
Hours/Day	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00		1.21
Days/Week	5	5	7	7	7	7	7	7		
Days/Year	260	260	365	365	365	365	365	365		

FTE Impact at Maricopa

The total impact for all clinical personnel for the existing sites is 11.7 additional FTEs.

Clinical Staffing & Operations

• EMR Cost-Benefit Analysis

5-Year ROI per Provider for EMR Implementation

	Initial Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Providers
Costs <i>(estimated from Wang Model)</i>								37
Software License (annual ASP)	\$ 1,600	\$ 1,600	\$ 1,600	\$ 1,600	\$ 1,600	\$ 1,600		
Implementation	3,400							
Support	1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500		
Hardware (refresh every 3 years)	6,600			6,600				
Productivity Loss		11,200						
Secure VPN/Highspeed Lines	200	200	200	200	200	200		
Annual Cost	\$ 13,300	\$ 14,500	\$ 3,300	\$ 9,900	\$ 3,300	\$ 3,300	\$ 47,600	System Total
Present Value of Annual Costs	\$ 13,300	\$ 13,810	\$ 2,993	\$ 8,552	\$ 2,715	\$ 2,586	\$ 43,955	\$ 1,626,345
Benefits								
Chart Pull Savings		8,725	8,725	8,725	8,725	8,725		
Transcription Savings		-	-	-	-	-		
Medical Records Request Process Savings		527	527	527	527	527		(CHS - 75 per week)
Chart Supply Costs (avg \$3 per chart)		1,398	1,398	1,398	1,398	1,398		
Alternative Use of Chart Storage Space?								
Prevention of Adverse Drug Events			2,210	2,210	2,210	2,210		
Drug Savings			17,683	17,683	17,683	17,683		
Laboratory Savings					1,495	1,495		
Radiology Savings					864	864		
Annual Benefits	\$ -	\$ 10,651	\$ 30,544	\$ 30,544	\$ 32,904	\$ 32,904	\$ 137,546	System Total
Present Value of Annual Benefits	\$ -	\$ 10,144	\$ 27,704	\$ 26,385	\$ 27,070	\$ 25,781	\$ 117,083	\$ 4,332,085
Net Benefit (Cost)	\$ (13,300)	\$ (3,849)	\$ 27,244	\$ 20,644	\$ 29,604	\$ 29,604	\$ 89,946	System Total
Present Value of Net Benefits (Cost)	\$ (13,300)	\$ (3,666)	\$ 24,711	\$ 17,833	\$ 24,355	\$ 23,195	\$ 73,128	\$ 2,705,740

Notes:

per provider costs unless specified otherwise

Source: Modified from Table 2, Wang SJ "A Cost-Benefit Analysis of Electronic Medical records", *The American Journal of Medicine*, vol 114, p. 399 (April 1, 2003)

Clinical Staffing & Operations

Solutions:

- **Recruitment & Retention, Agency Usage:**
 - Hire and assure leadership competency and success: COO, CNO, Nurse Managers, Finance Manager and Facilities & Supplies Manager
 - Developed a nursing recruitment and retention program: Placement-in-Range Strategy, Improved Orientation, Preceptor Bonuses, Improved Education Program, Nursing Recruiter, Recruitment Incentives
 - Immediate reallocation of workload: Clinic Scheduling
- **Clinical Operations:**
 - Redesign clinic orientation: Unit P-4 used “post booking holding area”, Intake medical screenings coordinated with MCSO to reduce to 7.5 minutes
 - Re-engineered the staffing model to increase medical capability on-site and reduce off-site referrals; improving staffing skill mix; staff the new facilities; and meet the projected increase in inmates.
 - EMR Solutions: Stakeholder Buy-in, RFP Development, Vendor Selection, and Implementation

Outside Services

- Problems:
 - High Inpatient, ER, and Specialty Consult Utilization:
 - FY 2005 run rate of \$8.5 million for all outside services
 - FY 2005 referral requests averaging 463 per month
 - Transportation and safety concerns from Sheriff's department
 - High number of inpatients per day – 13.1
- Methodology:
 - Identified disparate data sources
 - Combined data to measure the extent of the problem
 - Identified resources including providers, nursing staff, and administrative support to form new policies and guidelines for addressing the issues
 - Identified diagnoses that should be dealt with at jail not off-site

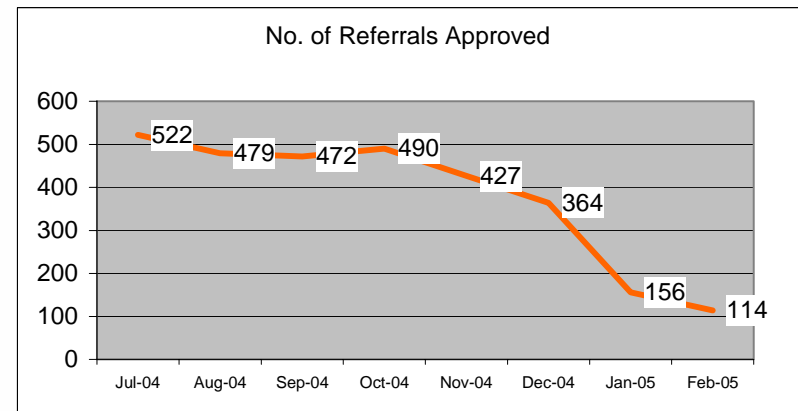
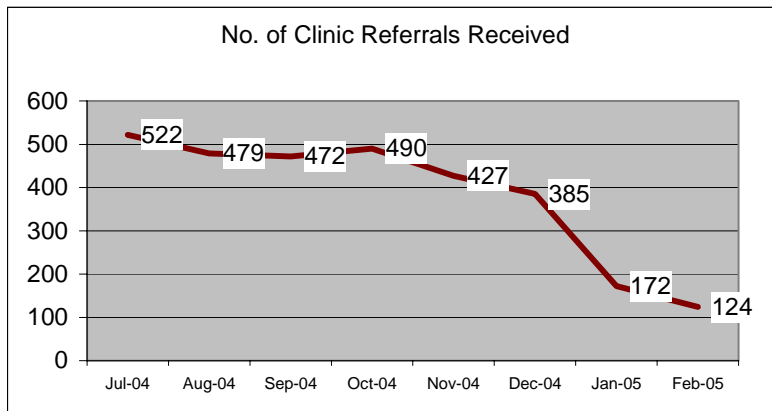
Outside Services

- Solutions:
 - Move to provider/specialist/RN patient care model
 - Reduce hospital transfers, transportation, and security costs through proactive staffing

	Outside Medical Services	
	<i>Including IP, OP Specialty, ED</i>	
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FY2005 Annualized	\$	8,528,029
FY2006 Budgeted	\$	6,798,810
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Savings	\$	1,729,219

Outside Services – OP Specialty Referrals

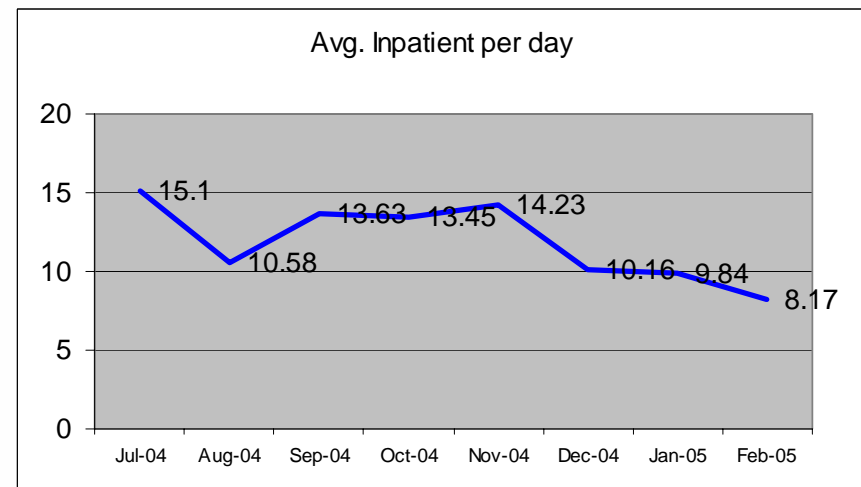
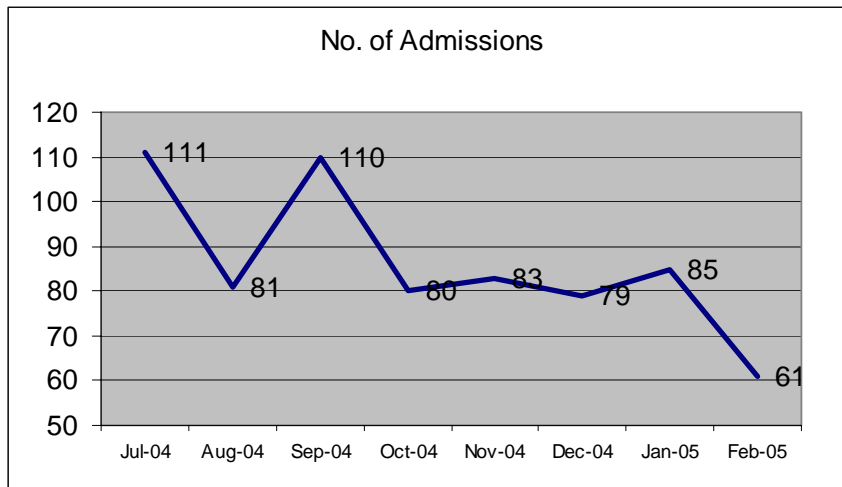
- Solutions:
 - Implementation a rigorous referral review process
 - Implementation of on-site specialty clinics: e.g. Orthopedic, General Surgery & Infectious Disease



Outside Services – IP Admissions

- **Solutions:**

- Achieved shorter lengths of stay through improved staffing and increased capacity in the Infirmary



- Changed CHS's medical practice model and initiated specialty clinics. This change allows much more diagnosis and treatment on-site, thereby reducing external provider expense by \$2.5 million and reducing MCSO transports for medical by 70%. CHS implemented.

Outside Services - Laboratory

- Solutions:
 - On-site testing to limit emergency room visits due to chest pain, abdominal pain and seizures
 - On-site Lab Testing Initiative: Return on Investment achieved in 3 months

CHS - Point of Care LAB Opportunity

Estimated Annual Costs	Without Point of Care LAB	With Point of Care LAB	Estimated Annual Savings
Annual Lab Charges	205,574	76,461	129,112
Average ER + Ambulance Cost FY 2005	1,106,550	733,098	373,452
Average Hospital Cost FY 2005	448,944	336,708	112,236
Point of Care Lab Costs	28,100.00	348,369.90	-320,270
GRAND TOTAL	1,789,168	1,494,638	294,530
Savings per Month			24,544
Estimated Equipment & Capitalization			71,698
ROI on Equipment in Months			2.92

Outside Services – “Restoration to Competency” (RTC)

- Problems:
 - High Costs of outside services for returning inmates to competency
 - Efficacy of overall program
 - Very high lengths of stay for in-custody defendants in system
- Methodology:
 - Develop and implement a county restoration to competency program that is responsible for providing forensic restoration treatment to inmates while achieving measurable results for:
 - Cost savings
 - Effectiveness in competency restoration
 - Evaluation and case processing
 - Reducing the average length of stay for in-custody defendants in county criminal justice system

Outside Services – “Restoration to Competency”

- Methodology (continued...):
 - Components of the Restoration to Competency “RTC” Program
 - Restoration Plan
 - Educational Program
 - Testing, Monitoring, History, Assessment
 - Reporting
 - Hearing & Testimony
 - Desert Vista MH Hearings
 - Physical Setting

Outside Services – “Restoration to Competency”

- Methodology (continued...):
 - 10 Step Restoration Treatment Process
 1. Referral from court and assignment
 2. Assessment / Stabilization / Workup
 3. Initial Contacts – Interview – Assess
 - Forensic Evaluation Explanation, Releases, Mini Mental, Psycho Social Evaluation, Psychiatric & Medical Assessment, Prior Rule 11s, Police Reports, Collateral Records, and History
 4. Restoration Treatment Plan tailored to case
 5. Education
 6. Testing
 7. Evaluation and Re-evaluation
 8. Reporting (Final, Status Reports to Court)
 9. Discharge
 10. Court Determination
 - Setting for Evidence Hearings, Record Production, Management Expert Testimony and Evidence

Outside Services – “Restoration to Competency”

- Solutions (Results):
 - Rule 11 Timelines – 2005

Rule 11 PreScreen & Evaluation	RTC	Court Resolution
60 -90 days	86 days	35 days

- Average Costs per Case - 2005

Rule 11 Evaluations	RTC	ASH	Court Resolution
90 days	86 days	90 days	35 days
\$3,817 MCSO	\$3,647 MCSO + \$3,247 RTC = \$6,894	\$38,610	\$1,484 MCSO

MCSO Costs: \$42.41 per day

RTC Costs: \$37.75 per day

ASH Costs: \$429 per day.

NOTE: Average ASH Cost per inmate 2-05 to date (\$32,708 and these are not completed cases)

Outside Services – “Restoration to Competency”

- Solutions (Results): 2005

- Total New Cases to RTC 316
- Total Completed Cases 357
- Average Length of Stay 86 days
- Cost per RTC Participant \$3,247
- Percentage Completed –78 days 49%
- Percentage Competent 80%

- Continued improvement of the in-jail restoration to competency program is saving Maricopa County up to \$10 million annually.

And by the way...The two largest correctional moves in US History- April & August, 2005

- Planned and executed the staffing, processes, and equipping for the healthcare delivery systems at the new 4th Avenue and Lower Buckeye Jails. Minimal operational planning before Jan. 2005
- 2700 and 3200 inmates respectively
- Doubled infirmary size and volumes
- Doubled psych size and volumes
- Added clinic capacity



Jail Move: News Articles

- “March in Underwear Calls Attention to New Jails”
- “Armed guards lined the streets as nearly 700 maximum-security inmates marched the four blocks from Towers Jail to Lower Buckeye Jail. They wore only pink underwear and pink flip-flops. Slowly and meticulously, the inmates, linked together with handcuffs, were corralled into a caged portion of the west Phoenix jail.”
- “In what Maricopa County Sheriff Joe Arpaio called one of the largest jail expansions in U.S. history, 2,630 inmates began moving from Madison Street Jail and Towers Jail into two new facilities — Fourth Avenue Jail in downtown Phoenix and Lower Buckeye Jail in west Phoenix.”

Lessons Learned

- Most of the challenges are unknown at the beginning of a turnaround
- Good operational and clinical data is rarely available
- Although many of the solutions need to be acted upon urgently, solicit as much participation as possible and communicate frequently
- Early successes are important

Lessons Learned

- Not everyone wants you to succeed
- Turnarounds are accompanied by high management turnover
- Upward and sideways communication is essential
- The circumstances requiring turnarounds can be avoided
 - Comparative data
 - Upwards communication
 - Review of alternatives
 - External reviews
 - Decisions based upon appropriate standards

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