

**Extreme makeover...**



**...The Home Edition**

# Extreme Pharmacy Makeover:



## From Layout to Automation, Understanding What Makes a Pharmacy Work

Presented by:  
Christopher J. Thomsen  
The Thomsen*Group* Inc.

# Extreme Pharmacy Makeover

## Learning Objectives

1. Evaluate your pharmacy and make simple changes to the pharmacy layout, fixtures and furniture to improve workflow, efficiency and productivity.
2. Describe changes that can be made to your practice and with technology that will help to improve medication dispensing safety, implement health care related programs and implement and/or increase other areas of the profession and business.
3. List a variety of automated counting, robotic, workflow and pouch packaging systems can be utilized to meet the immediate needs of a pharmacy's prescription volume, labor demands and desire to engage in other health related programs.
4. Describe "real life" examples of pharmacy owners and managers who utilize automation and technology and have realized the successful launch of other "health care related" programs.
5. Explain basic evaluation criteria and simple ROI models that will allow you to determine what kind of structural changes can be made or which type of automation/technology best fits your pharmacy operation and your needs.

# Extreme Pharmacy Makeover

## Managing the Process

Objectives

Plan

Budget

Team

Time Line

# Today's Challenges

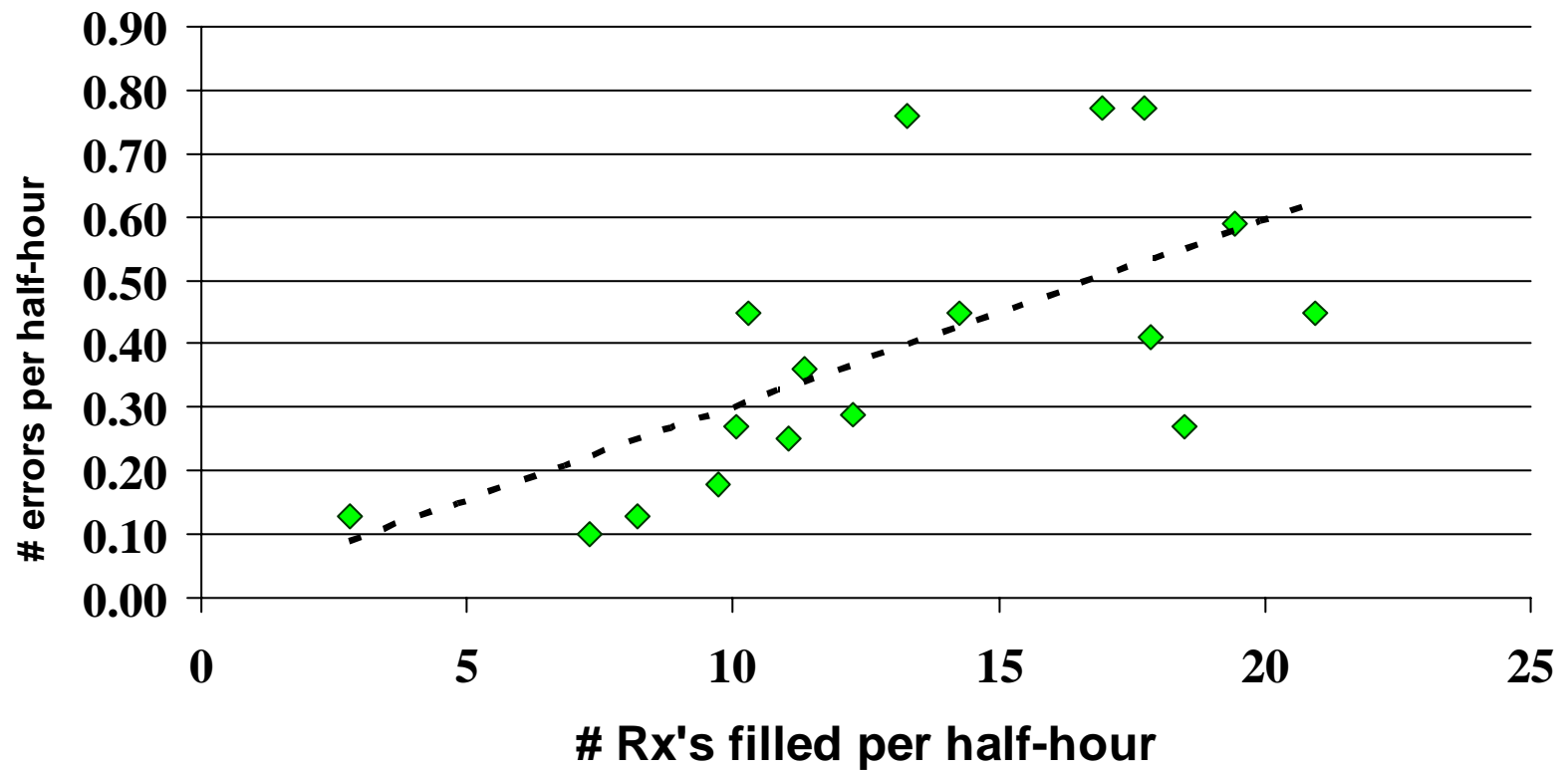
# Extreme Pharmacy Makeover

## Volume and Staff



# Extreme Pharmacy Makeover

## Safety



# Extreme Pharmacy Makeover

## Financial Concerns

Average Medicaid generic  
prescription reimbursement  
decreased by \$4.25

Average generic  
Payments  
reduced by about 17%.

# Extreme Pharmacy Makeover

## Financial Concerns

The Economy

AWP

AMP

# Extreme Pharmacy Makeover

## Changing Role



## Commodity

# Extreme Pharmacy Makeover

## Changing Role

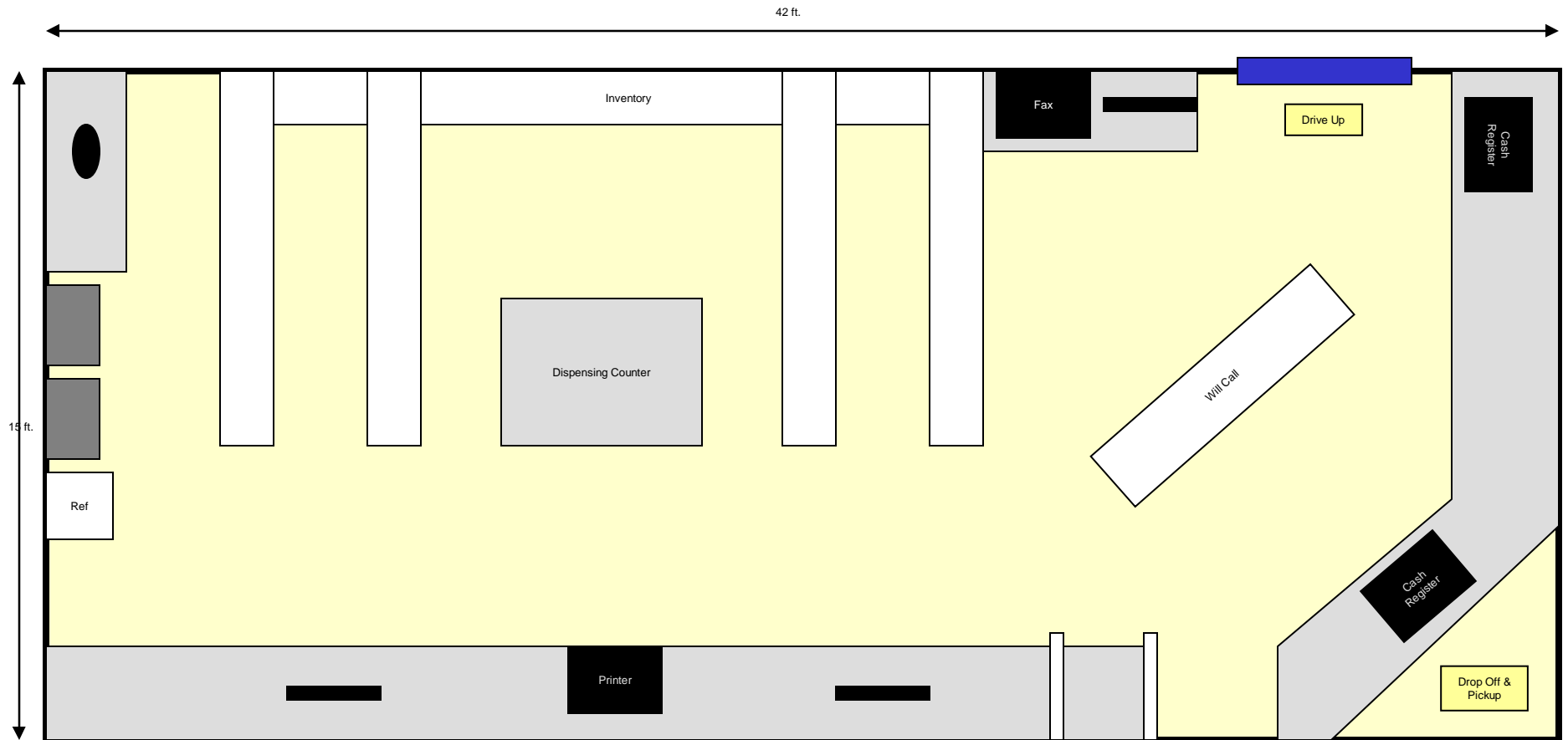


Caregiver

## **Extreme Pharmacy Makeover**

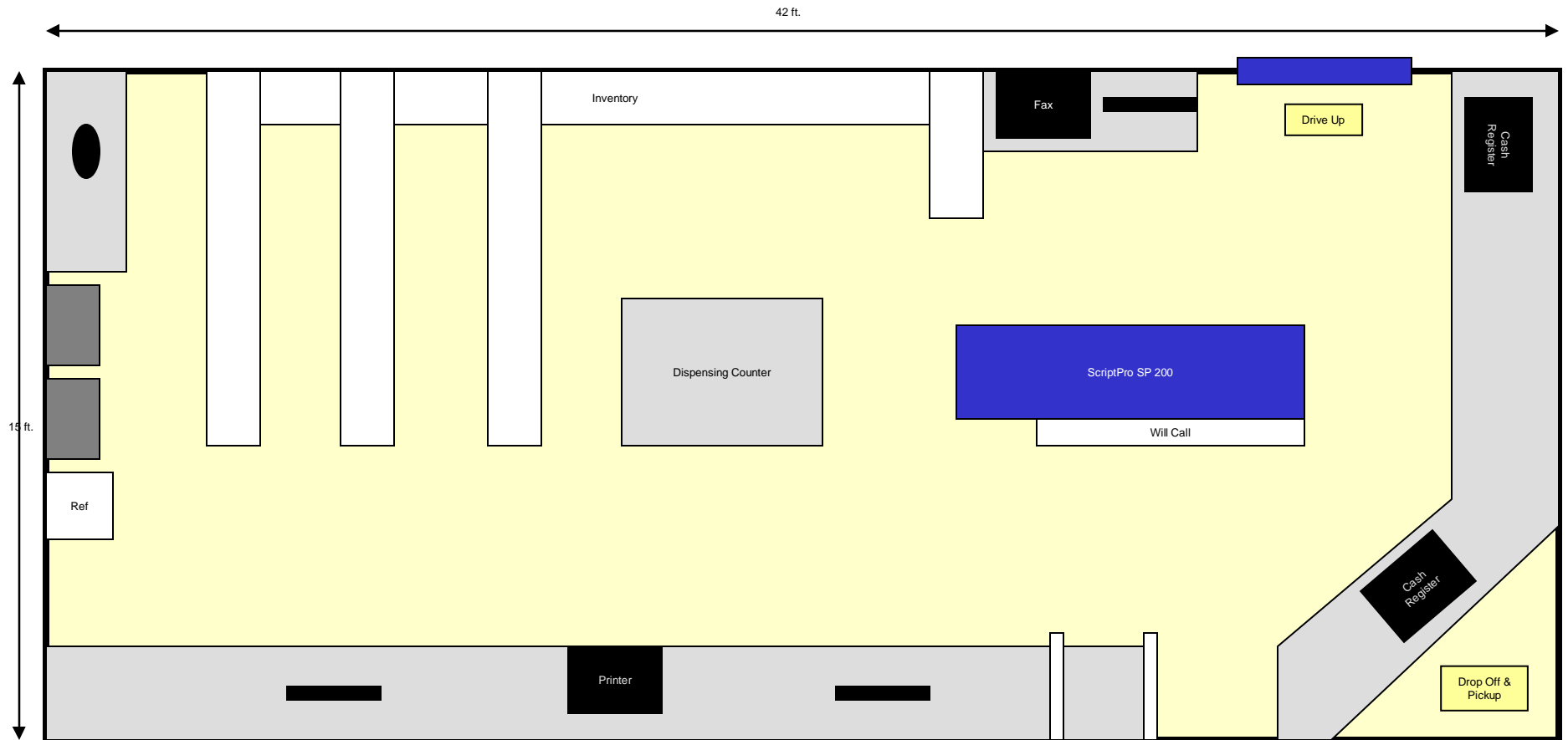
# **The Pharmacy**

# Extreme Pharmacy Makeover



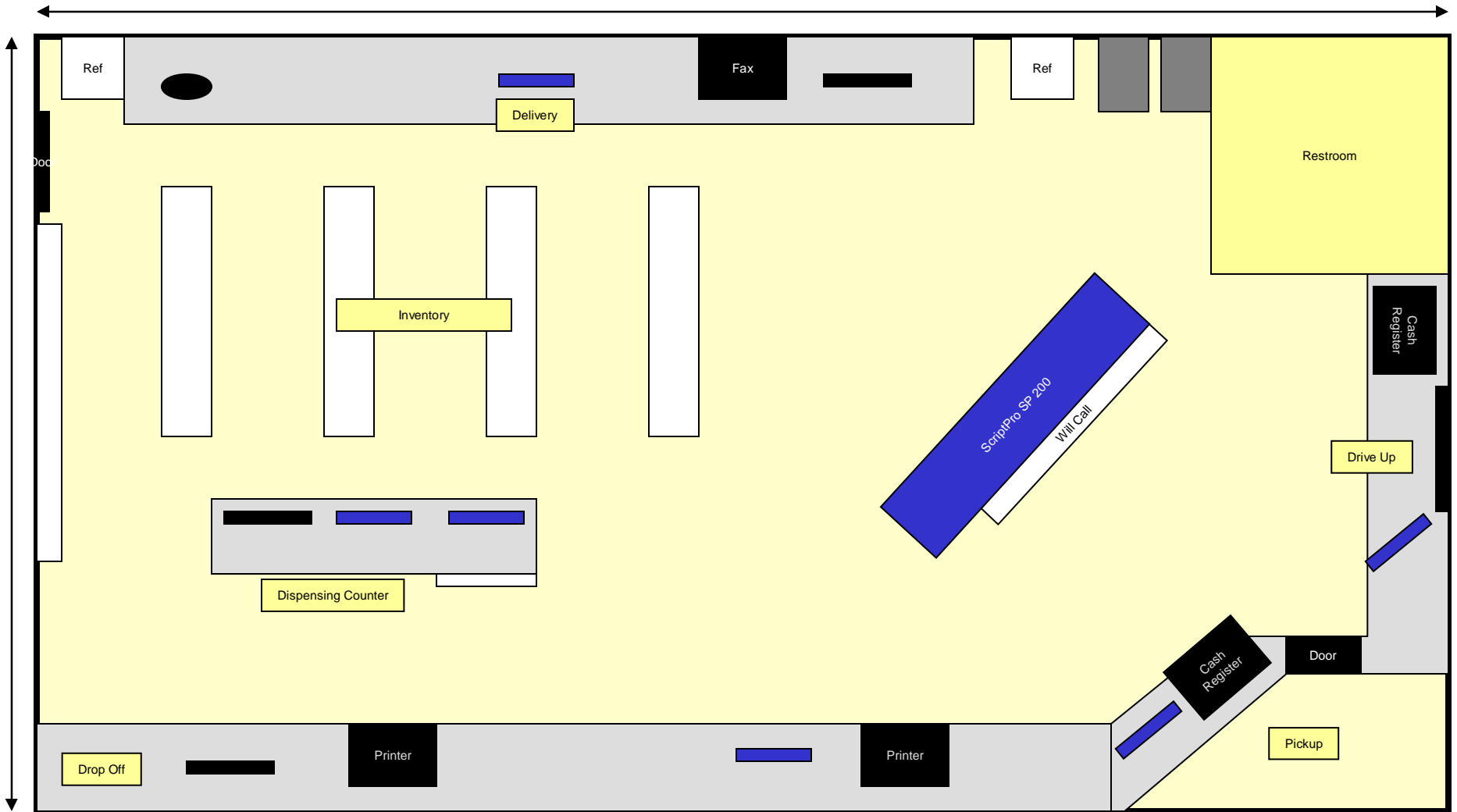
**Hy-Vee Cedar Rapids Pharmacy**  
Pre-Installation Layout

# Extreme Pharmacy Makeover



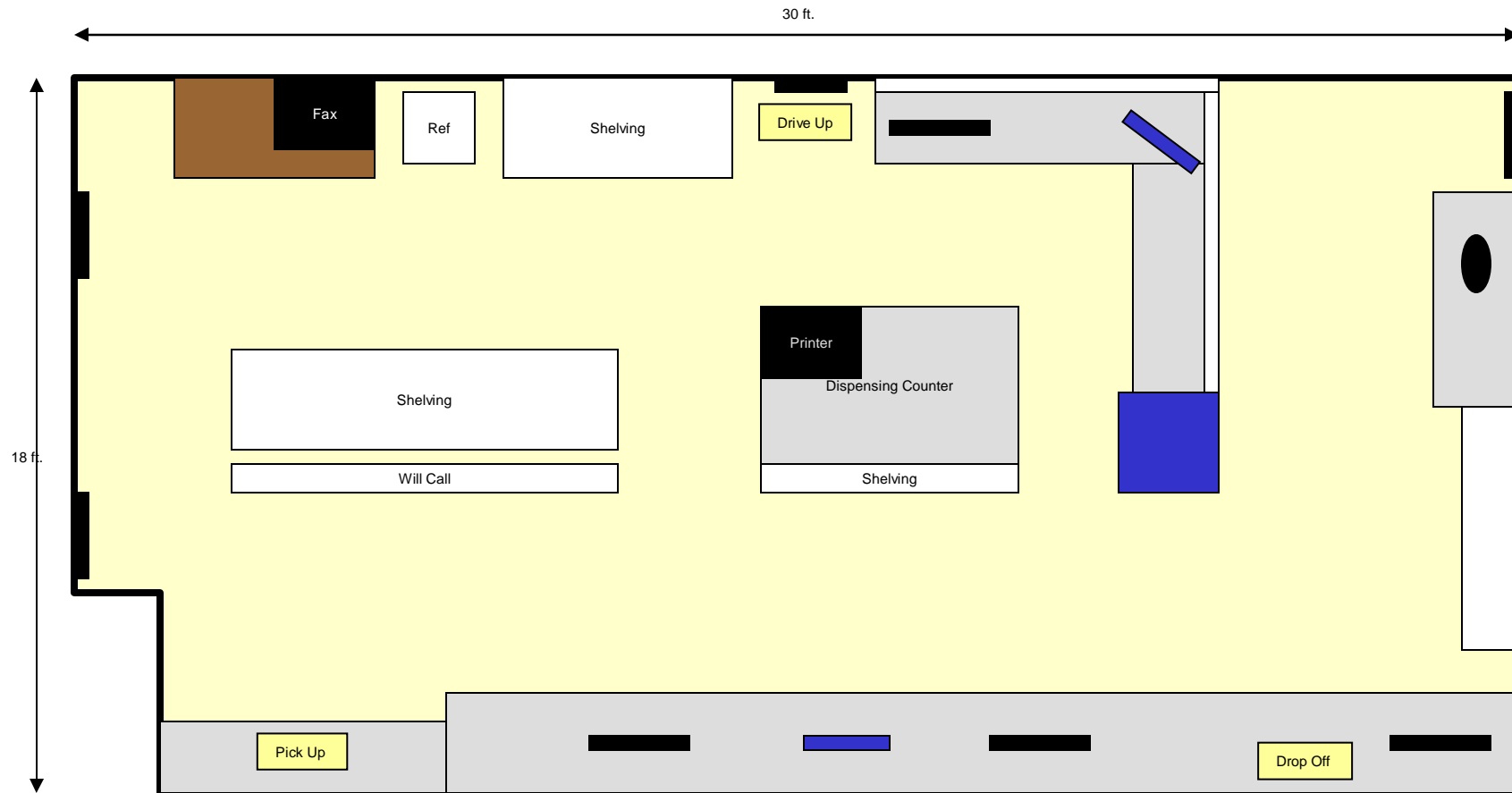
**Hy-Vee Cedar Rapids Pharmacy**  
Post-Installation Layout

# Extreme Pharmacy Makeover



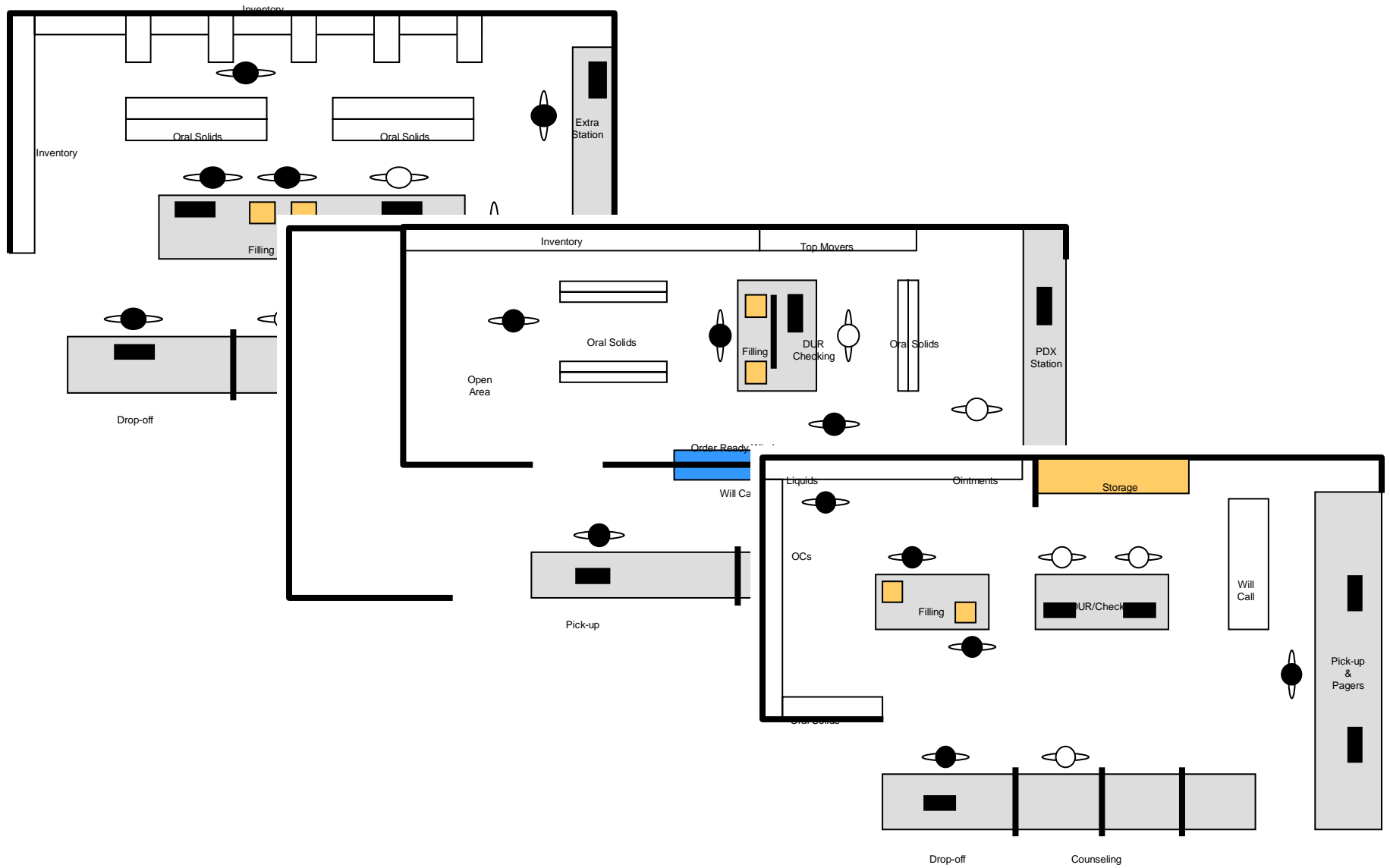
Hy-Vee Quincy Pharmacy  
Current Layout

# Extreme Pharmacy Makeover



**Hy-Vee West Des Moines Pharmacy**  
Current Layout

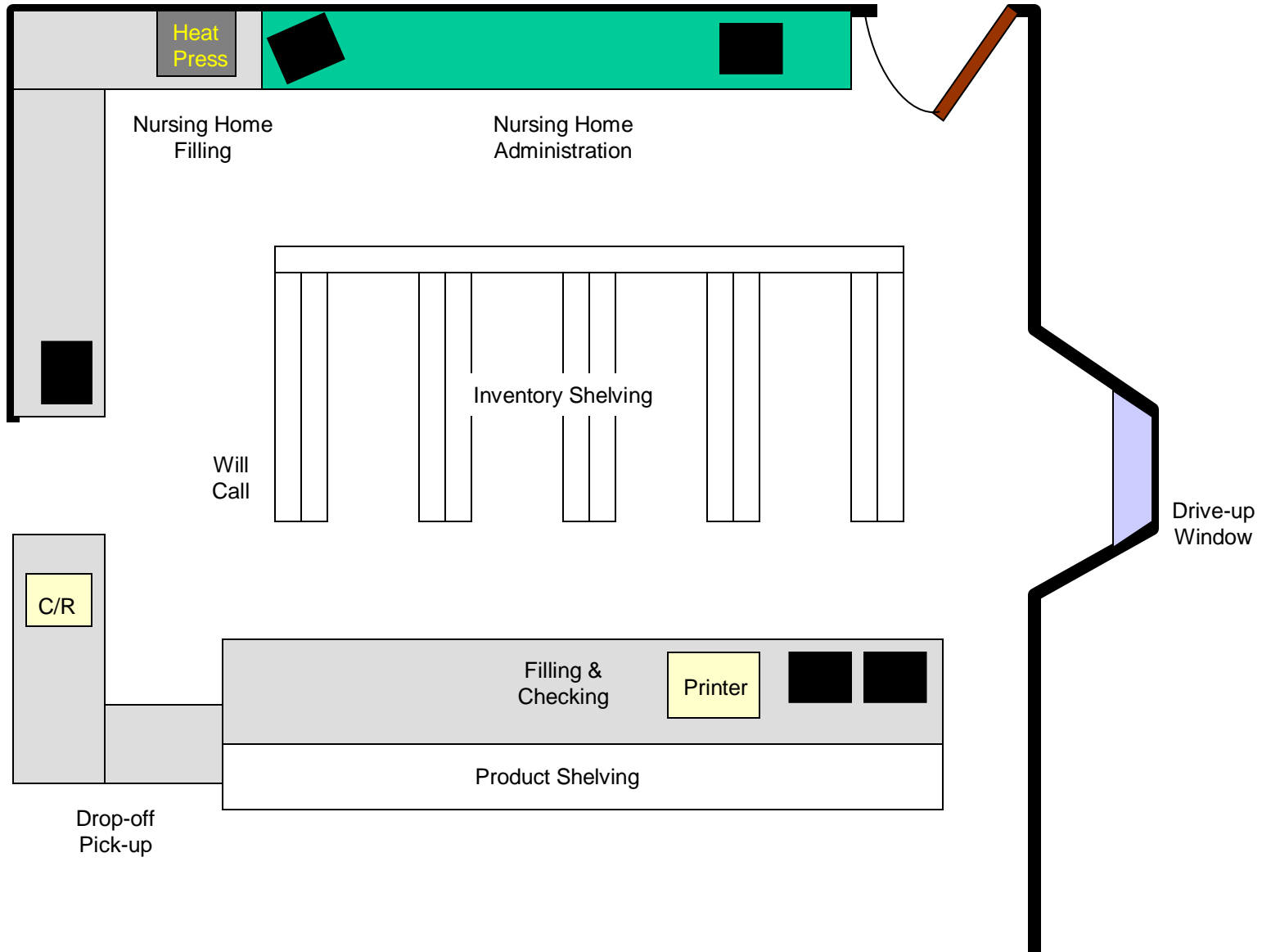
# Extreme Pharmacy Makeover



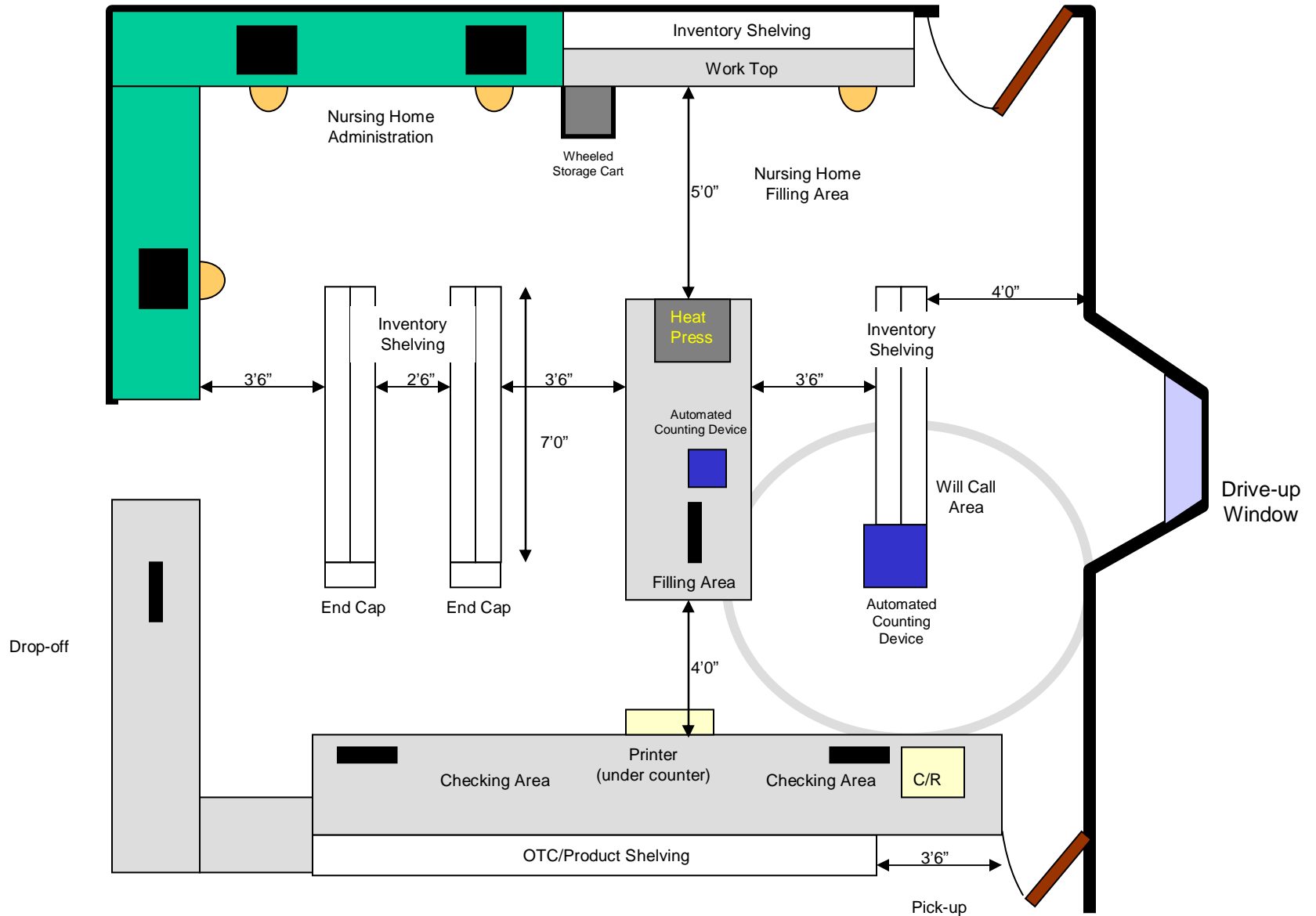
# Extreme Pharmacy Makeover



# Extreme Pharmacy Makeover



# Extreme Pharmacy Makeover



# Extreme Pharmacy Makeover



## **Extreme Pharmacy Makeover**

# **Simplicity First**

# Extreme Pharmacy Makeover

**Lighting levels:** 73% of the content errors occurred in pharmacies with a lighting level below 94 foot candles in the inspection area.

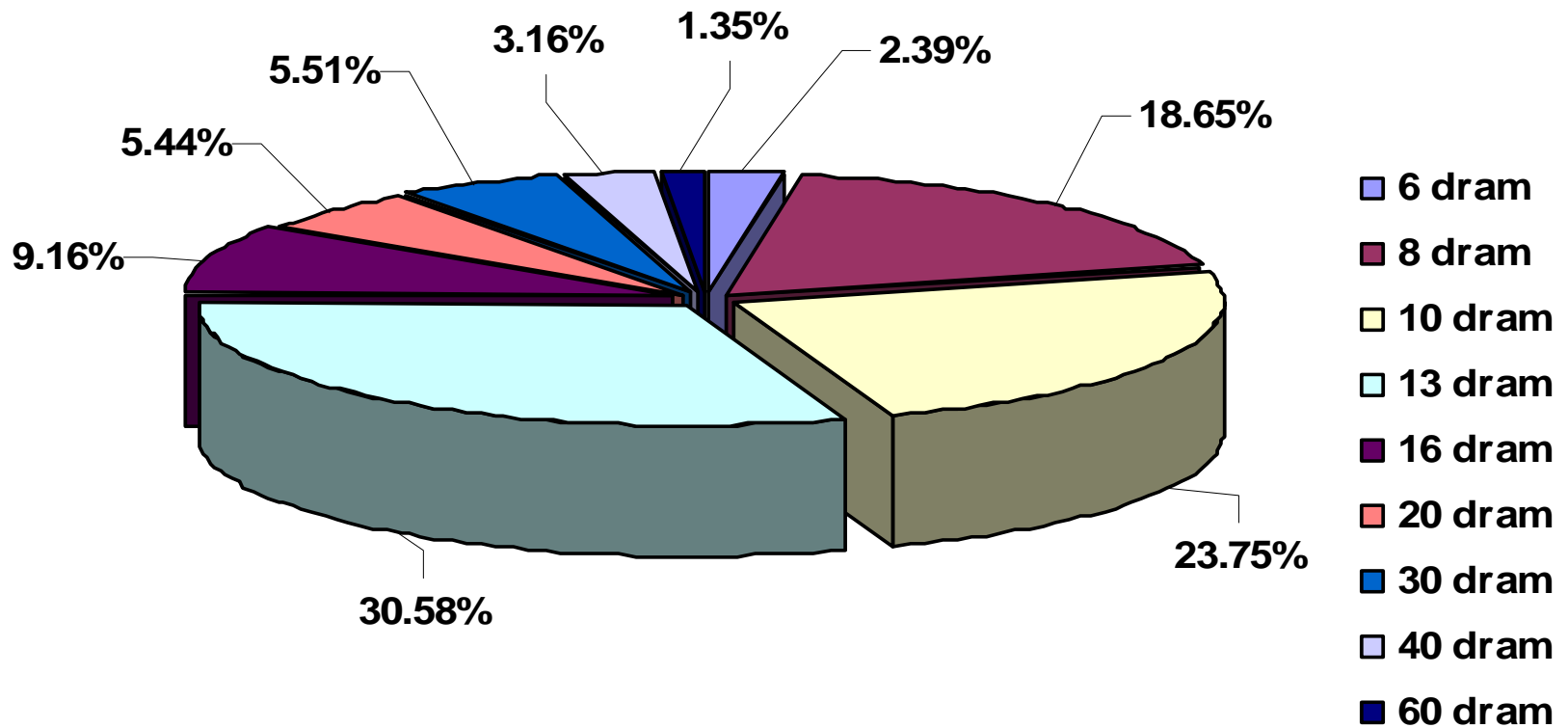


# Extreme Pharmacy Makeover



# Extreme Pharmacy Makeover

## Pharmacy Vial Usage



# Extreme Pharmacy Makeover

RANK	DESCRIPTION	PKG	DISP	NDC NO.	SUPPLIER	DOLLAR	COST	FEE	GROSS	# OF SCRIPTS			UNITS
										SIZE	UNIT	CODE	
1	GLYCOLAX POWDER	527	GM	62175044231	981790	263.76	205.38	1	22.1	5	2	7	4743
2	PBS 3350/ELECTROLYTE SOLN RRE	4000	ML	62175044601	2245678	22.99	10.00	300	56.5	1	0	1	4000
3	HYDROCODONE-APAP SOLUTION BTH	480	ML	56177090907	979320	169.88	81.02	22	52.3	0	2	2	3840
4	HYDROCODONE/APAP 5/500 TAB WAT	500	TA	00591034905	919810	661.71	78.42	7245	88.1	50	16	56	2932
5	CHLORHEXIDINE 0.12% RINSE TEV	480	ML	00093001416	2638721	53.88	14.70	6570	72.7	6	0	6	2880
6	HYDROCODONE/APAP 7.5/750 TBWAT	500	TA	00591038705	2793743	488.95	100.29	7252	79.5	18	12	30	2130
7	HISTINEK HC SYRUP BTH	480	ML	56177087707	981350	89.37	18.81	1195	79.0	9	2	11	1980
8	PROPOXY-N/APAP 100-650 TAB MCK	500	TA	00406172105	910900	456.30	78.06	8035	82.9	30	7	37	1807
9	GLYCOLAX POWDER	255	GM	62175044215	1246008	121.07	79.45	1	34.4	5	2	7	1705
10	PROMETHAZINE/COSMINE SYRUP ALP	480	ML	00472262716	910850	93.75	26.24	2005	72.0	9	1	10	1590
11	METFORMIN HCL 500MG TABLET TEV	100	TA	00093104801	978230	416.31	121.76	43	70.8	8	13	21	1561
12	GLYBURIDE 5MG TABLET TEV	1000	TA	00093834410	907570	316.53	83.52	7170	73.6	1	14	15	1440
13	PURPOSEMIDE 40MG TABLET SAN	1000	TA	00781196610	981770	273.53	32.02	7130	88.3	9	26	35	1439
14	HYDROCHLOROTHIAZIDE 25MG TBWEN	1000	TA	00172208380	1718675	276.22	31.29	7230	89.7	8	29	37	1425
15	ALPRAZOLAM 1MG TABLET SAN	100	TA	00781107901	2238970	245.98	62.00	6185	74.8	8	5	13	1245
16	ATELOLOL 50MG TABLET SAN	1000	TA	00781150610	908960	257.63	39.50	6382	84.7	5	21	26	1140
17	ALPRAZOLAM 0.5MG TABLET SAN	500	TA	00781107705	910770	264.21	42.57	6180	83.9	11	7	18	1130
18	HYDROCODONE/GUAIFENESIN SYRETH	480	ML	56177088107	978790	81.23	10.46	302	87.1	7	1	8	1080
19	AMOXICILLIN 500MG CAPSULE GEN	500	CA	00781263305	977860	310.84	31.13	8380	90.0	34	4	38	1024
20	METFORMIN HCL ER 500MG	100	TA	00093726701	981000	392.14	84.54	7156	78.4	2	7	9	1020
21	LISINAPRIL 20MG TABLET TEV	100	TA	00093112401	908420	360.82	96.38	7409	73.3	5	24	29	1011
22	LIPITOR 20MG TABLET P-D	90	TA	00071015623	907940	1,345.38	2,972.36	7402	11.2	5	24	29	991
23	LIPITOR 10MG TABLET P-D	90	TA	00071015523	980670	2,211.96	1,851.32	7400	14.5	6	24	30	915
24	ONE TOUCH ULTRA TEST STRIPS/PS	100	EA	53885024510	911420	720.31	666.00	6010	7.5	5	4	9	900
25	AMOXICILLIN 400MG/5ML SUSP BAN	100	ML	63304097004	1100358	73.97	49.41	6260	33.2	6	0	6	900
26	GABAPENTIN 300MG CAPS TEVA	100	CA	00093103901	909010	946.06	614.98	1690	35.0	2	8	10	884
27	CEPHALEXIN 500MG CAPSULE TEV	500	CA	00093314705	909340	362.60	88.60	6565	75.6	24	3	27	852
28	LISINAPRIL 10MG TABLET TEV	100	TA	00093111301	908470	277.18	50.59	7408	81.7	11	13	24	803
29	RANITIDINE 150MG TABLET PAR	60	TA	49884054402	910270	182.55	25.46	8095	86.1	5	9	14	800
30	NORVASC 5MG TABLET PFI	300	TA	00069153072	981250	1,202.25	1,071.05	7755	10.9	2	18	20	772
31	NAPROXEN 500MG TABLET TEV	500	TA	00093014905	910200	168.55	38.07	7640	77.4	7	8	15	772
32	ZOLOFT 100MG TABLET ROE	100	TA	00049491066	983670	1,972.75	1,724.05	8610	12.6	9	13	22	750
33	ALPRAZOLAM 0.25MG TABLET SAN	500	TA	00781106105	910790	93.85	23.09	6175	75.4	7	3	10	750
34	AMOXIL 250MG/5ML SUSPNS10MGSK	150	ML	00029600922	978550	31.34	11.25	6280	64.1	5	0	5	750
35	NEBIUM 40MG CAPSULE	1000	CA	00186504082	979010	3,162.64	2,931.90	7965	7.3	8	16	24	741
36	TRAMADOL HCL 50MG TABLET CAR	100	TA	57664037708	908480	208.12	123.27	78	39.8	5	5	10	736
37	ASACOL 400MG TABLET EC P&G	180	TA	00149075215	979540	675.70	634.04	340	6.2	2	1	3	720
38	GEMPIBROXIL 600MG TABLET APO	500	TA	60505003408	909620	235.79	117.83	7140	50.0	2	8	10	720
39	ALBUTEROL 90MCG INHALER WAR	17	GM	59930156001	908720	473.30	123.06	40	74.0	17	18	35	714
40	METOPROLOL 50MG TABLET TEV	100	TA	00093073301	909580	114.66	18.25	7555	84.1	3	9	12	702
41	MERGEPTROL ACET 40MG/ML SUSPPAR	240	ML	49884090730	2456838	255.07	187.82	301	26.4	2	0	2	680
42	AMITRIPTYLINE HCL 10MG TAB SAN	1000	TA	00781148610	2462562	63.61	16.68	6240	73.7	3	4	7	670
43	PREDNISONE 10MG TABLET UTR	1000	TA	00677069810	910360	134.92	13.14	7920	90.3	16	2	18	664
44	METHADONE HCL 10MG TABLET ROX	100	TA	00054457125	1252089	72.57	51.08	0	29.6	2	0	2	660

# Extreme Pharmacy Makeover

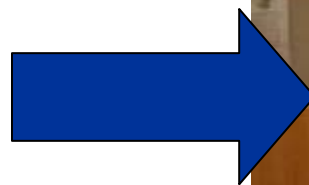
**Tightly packed shelves:** 66% of content errors associated with tight spacing.



Flexible and Adjustable Systems

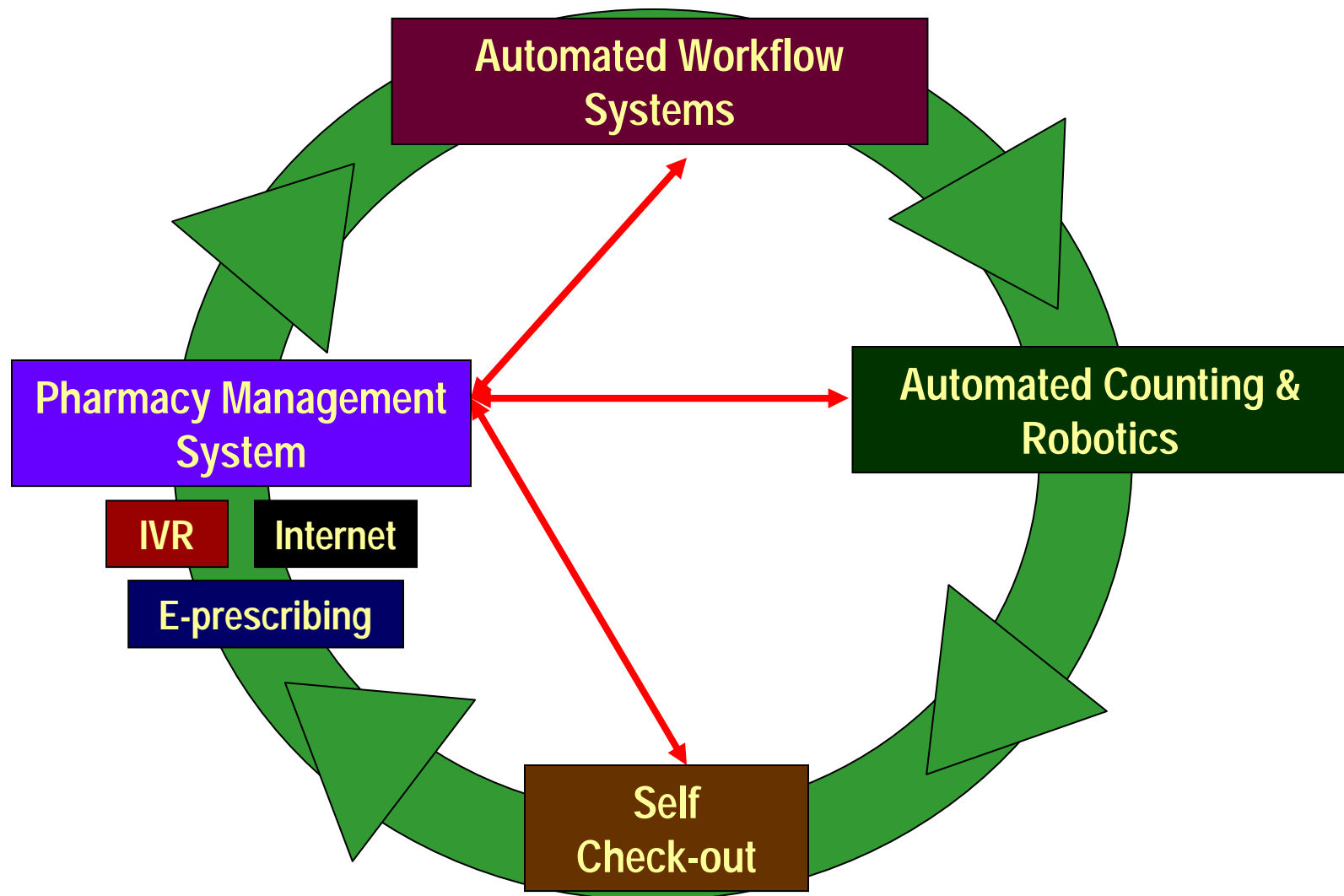


# Extreme Pharmacy Makeover



# **Automation & Technology**

# IVR Technology in Today's Community Pharmacy



# IVR Technology in Today's Community Pharmacy

## Factors Driving Automation

- Acute shortage of technicians and pharmacists
- Chance of medication errors
- Managing costs
- Increasing script volumes
- Customer satisfaction and service levels
- New market opportunities



# Extreme Pharmacy Makeover



# Extreme Pharmacy Makeover



IVR

CARDIOVASCULAR ASSOCIATES, P.C

(541) 484-4332 1200 HILYARD ST., STE. S-480 EUGENE, OREGON 97401 Dennis J. Gory, M.D. Richard E. Romm, M.D. Patrick J. Bergh, M.D. Michael J. Giber, M.D.	(541) 747-1272 900 N. 18TH ST., STE. 104 SPRINGFIELD, OREGON 97477 Jay H. Cheppell, M.D. Richard C. Padgett, M.D.	(541) 484-1545 677 E. 12TH AVE., STE. N-540 EUGENE, OREGON 97401 Daniel G. Rostenford, M.D. Jarold A. Hawn, M.D. Leonard G. Christie, Jr., M.D. Michael G. Artimslers, M.D. James H. McClelland, M.D.
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NAME [REDACTED]  
ADDRESS [REDACTED] DATE 3/16/06

10-  
p.c. 2D  
200  
# [REDACTED]  
[Signature], M.D.



# Extreme Pharmacy Makeover

## IVR Reality

**Doctor Fax Authorization** – This type of application or module works every time a patient enters a refill that requires authorization.

**Prescription Pick-ups** – An application that helps the pharmacy control the prescriptions in the "will-call" bins. The module activates automated outbound reminder calls to patients to tell them that their prescription refill is ready.

**Internet Refills** - Allows a patient to request prescription refills via the pharmacy's Web site. The application confirms and notifies the patient whether or not refills are available and schedules a pickup time. The request is then posted to the pharmacy system work queue.

# Extreme Pharmacy Makeover

## IVR Reality

**Pharmacy Based** - a fast and convenient way for staff to enter a refill request. Instead of using a pharmacy terminal, the pharmacy staff use a small touch screen that can be used to securely submit a prescription refill directly to the pharmacy system.

**Kiosks**- is a self-service touch screen that can be placed on the counter or as a kiosk that gives patients the ability to place refill requests from any location that is connected to the pharmacy network.

# Extreme Pharmacy Makeover

## IVR Reality

- 33% reduction in phone ringing and distraction
- 60% of refills could be processed in this manner
- ROI is generally less than 6 months
- Interfaces with Pharmacy Management Systems, Fax and Dispensing Systems



# Extreme Pharmacy Makeover

## Internet

**ABC Pharmacy** Login or Register | Order Status | My Account | Shopping Cart

HOME PHARMACY HEALTH INFO PHOTO SHOP ONLINE COMPANY INFO ? HELP

**Making Your Life Easier!**  
We've made ordering prescriptions better online. Need help? Learn more about our easier system, or Register now to get started.

**ORDER PRESCRIPTIONS** **QUICK REFILLS**  
REFILLS NEW PRESCRIPTIONS TRANSFERS

**Search:**  
Store Products  
No Items Shopping Cart  
Shopping List  
No Items Add Prescriptions

**WHAT'S NEW**

**backtoSchool**  
It's time to go back to school  
Get More for School at your local Eckerd. Buy products online using

**New Prescription Ordering Process**  
We've updated the layout of the prescription order

**ECKERD DIABETES SOLUTIONS SM**  
Download the 1-Minute Educator  
Read about research findings from trusted sources and get

**FIND A STORE**

**ECKERD RESOURCES**  
What's New  
Health Information  
Drug Advisor  
Ask the Pharmacist  
Baby Care  
Savings + More  
Customer Service  
Employment  
Contact Us  
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# Extreme Pharmacy Makeover

## E-prescribing



# Extreme Pharmacy Makeover

## Automated Counting Systems



# Extreme Pharmacy Makeover

“Utilization of simple prescription technologies, like **bar codes and onscreen drug images**, can reduce medication dispensing errors by one full percentage point.”

# Extreme Pharmacy Makeover



**AutoMed**  
An AmerisourceBergen Company

# Extreme Pharmacy Makeover



Innovation Associates

# Extreme Pharmacy Makeover



**Parata Systems**  
(Formerly McKesson APS)

# Extreme Pharmacy Makeover



ScriptPro USA

# Extreme Pharmacy Makeover



Asteres, Sintek & AutoMed

# Extreme Pharmacy Makeover

## Workflow Systems



order entry



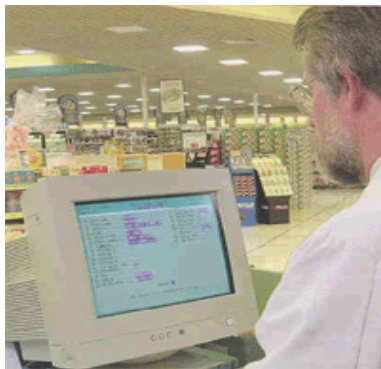
adjudication



labeling



filling



verification



quality assurance



storing and billing



delivery validation

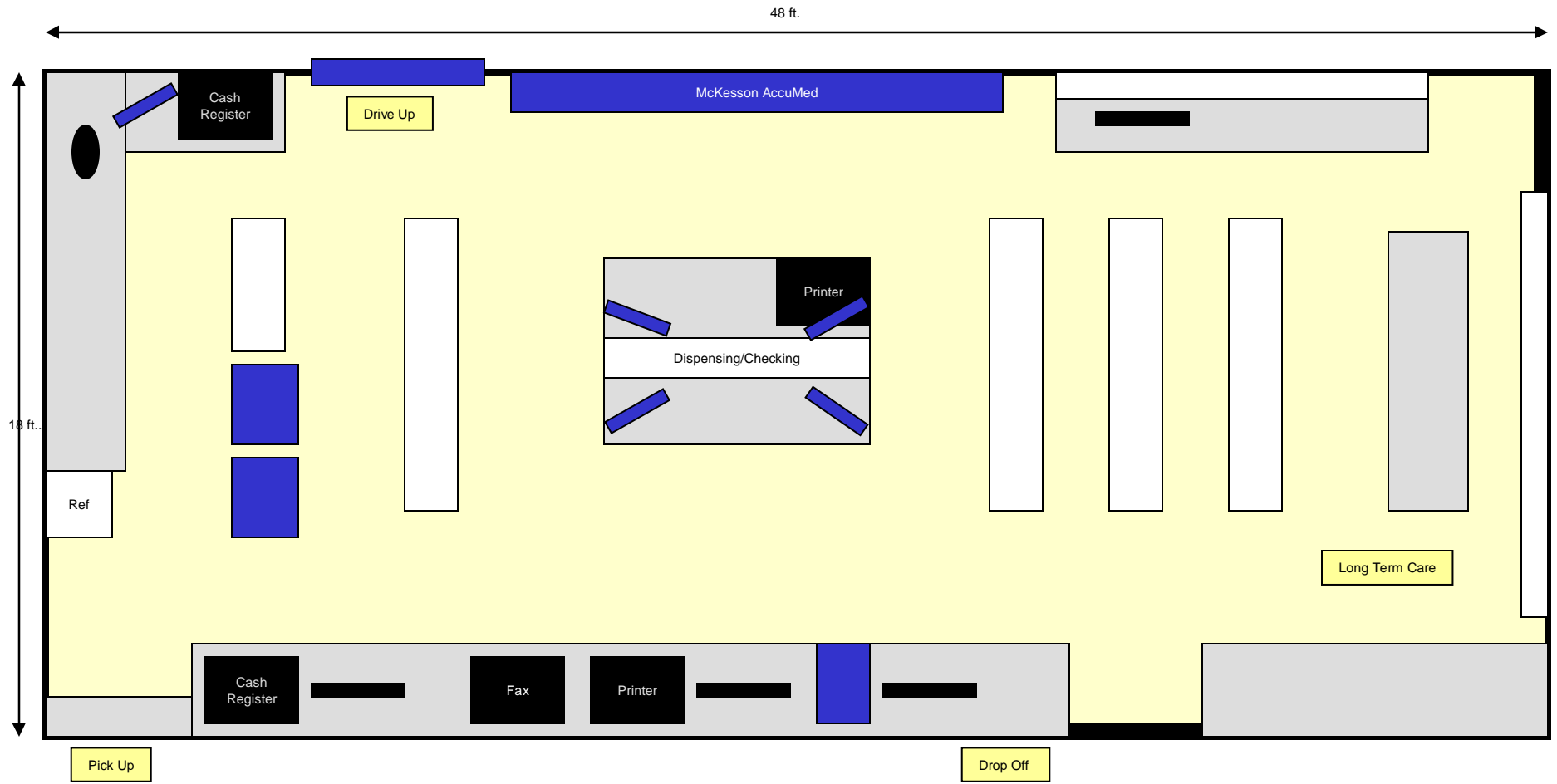
# Extreme Pharmacy Makeover

## Case Study

# Extreme Pharmacy Makeover



# Extreme Pharmacy Makeover



Hy-Vee Le Mars Pharmacy  
Current Layout

# Extreme Pharmacy Makeover



# Extreme Pharmacy Makeover



# Extreme Pharmacy Makeover



## **Extreme Pharmacy Makeover**

**Over \$600,000 invested  
in dispensing, tracking  
and will call technology**

# Extreme Pharmacy Makeover



# Extreme Pharmacy Makeover

**Study** pharmacy answers the phone an average of every **2.31 minutes** (25.97 per hour) and fills an average of almost **300** prescriptions per day.

# Extreme Pharmacy Makeover

Study pharmacy phone calls:

- 32% - questions about front end merchandise
- 16% - questions about hours of operation
- 34% - requests for Rx refills
- 6% - questions about Rx being ready
- 12% - questions for the pharmacist

# Extreme Pharmacy Makeover

One More Thing



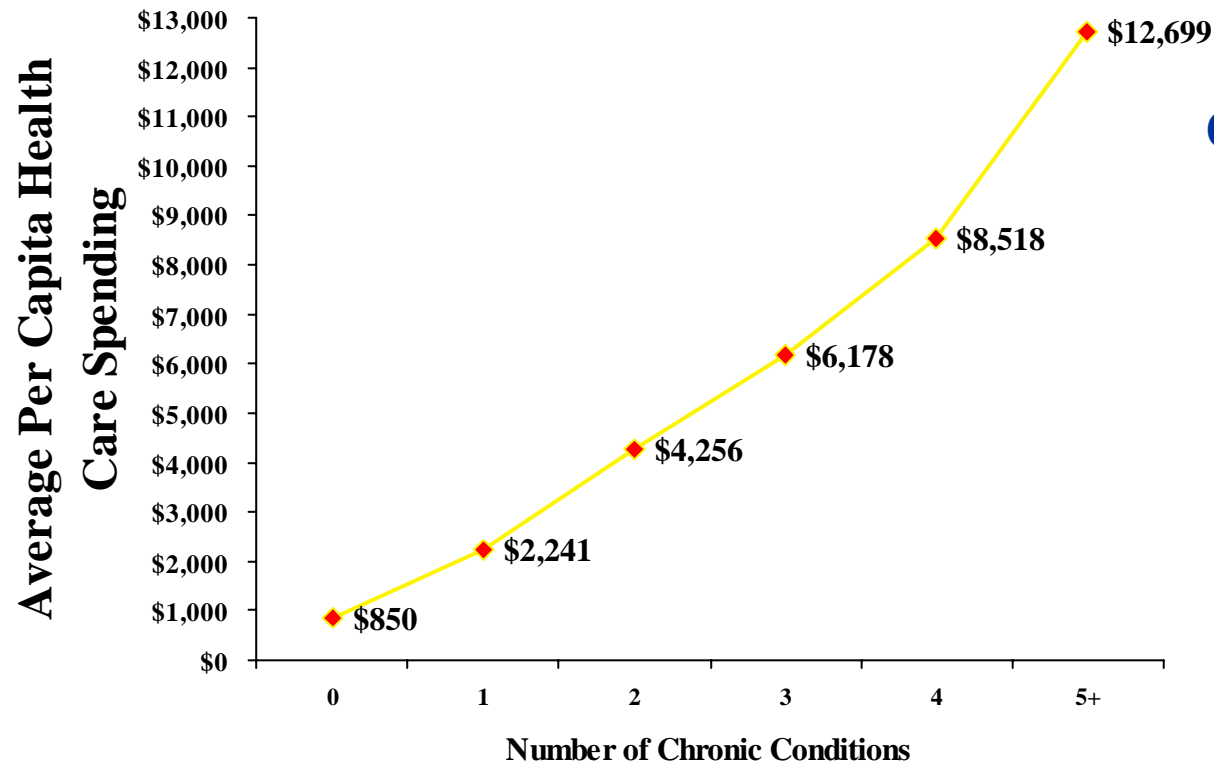
# Extreme Pharmacy Makeover

**\$177 billion** is wasted annually on  
drug related complications

# Extreme Pharmacy Makeover

**83%** of the prescription errors in a community pharmacy are **discovered during patient counseling** and are corrected before the patient leaves the pharmacy.

# Extreme Pharmacy Makeover



**Compared to people with no chronic conditions:**

- Spending is over **seven times greater** for someone with **three chronic conditions**.
- Spending is almost **15 times greater** for someone with **five or more chronic conditions**.

Johns Hopkins University, Partnership for Solutions

Source: Medical Expenditure Panel Survey, 2001.

David G. Schulke, AHQA

# Extreme Pharmacy Makeover



Caregiver



# Extreme Pharmacy Makeover

Potential new revenue stream as  
**MTMS reimbursement** will be  
provided to pharmacists who  
complete special  
**Training Programs**

# Extreme Pharmacy Makeover

**OUTCOMES**  
Pharmaceutical Health Care™

Leading the Nation in Medication Therapy Management Services

HOME CONTACT US LOG IN

Employers & Health Plans Consumers Pharmacists Partnerships Press Room Company

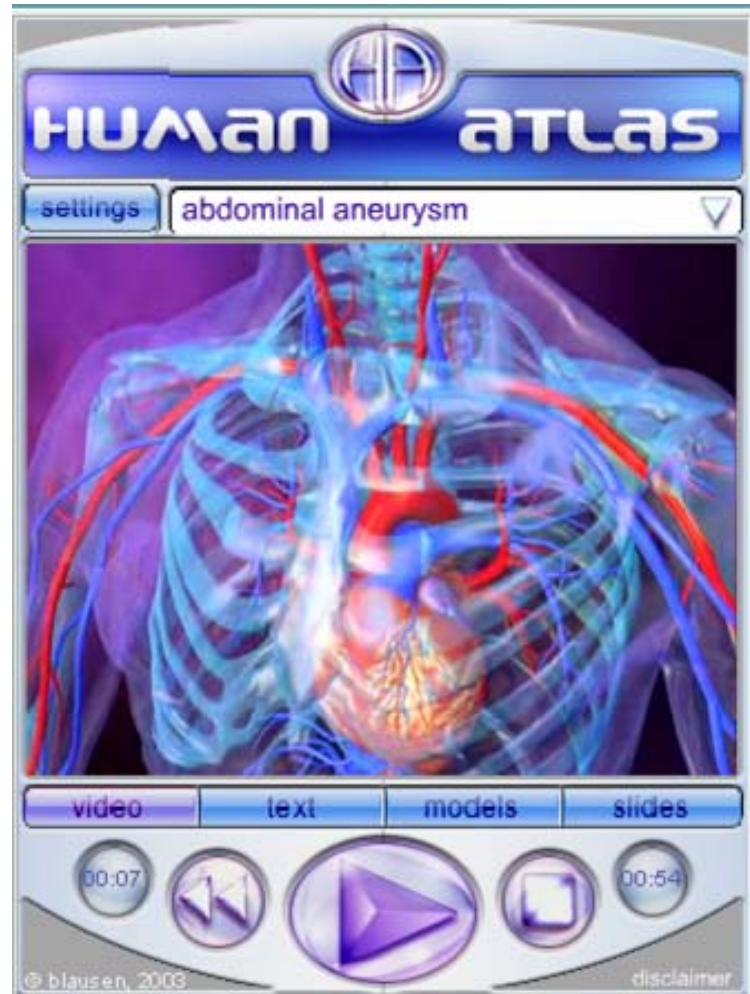
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- [Order Supplies](#) >
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NCPA  Mirixa<sup>SM</sup> *The Power of Pharmacy*

# Extreme Pharmacy Makeover



[www.mercksource.com](http://www.mercksource.com)

# Extreme Pharmacy Makeover



# Extreme Pharmacy Makeover



# Extreme Pharmacy Makeover

# Summary

# Extreme Pharmacy Makeover

Step outside of your pharmacy and look at the “big” picture

Start “small” and have a plan

Pharmacy automation/technology can not provide “magical” results.

A complete pharmacy makeover requires serious effort and continuous management.

# Extreme Pharmacy Makeover

Average Daily Volume	Dispensing Technology	Automated Workflow	Automated Will Call	Interactive Voice Response
Above 1000	Automated counting and robotics	Yes	Yes	Yes
800 to 1000	Automated counting and robotics	Yes	Consider	Yes
600 to 800	Automated counting and robotics	Yes	No	Yes
400 to 600	Automated counting and robotics	Yes	No	Yes
300 to 400	Automated counting and maybe robotics	Yes	No	Yes
200 to 300	Automated, table top counting	Yes	No	Yes
100 to 200	Automated, table top counting	Yes	No	Yes
Less than 100	Automated, table top counting	Yes	No	Yes

# Extreme Pharmacy Makeover

## Know What You Want to Achieve

- Automatically handle calls and refill requests
- Seamlessly prompt pick-up and/or compliance
- Eliminate manual labor from the filling process
- Store and dispense some or all prescriptions
- Automate vial retrieval & labeling
- Automatically track and manage, prescriptions
- Standardize the prescription filling process
- Track, manage and/or deliver completed prescriptions

# Extreme Pharmacy Makeover

## Selecting Technology

- Daily/weekly prescription volume
- Ratio of oral solid prescriptions vs. pre-packs, other
- Prescription volume & revenue growth/decline rates
- Hours of operation
- Size and availability of staff
- Wages and benefits for every staff member
- Daily and annual labor costs
- Current cost (labor included) to fill a prescription
- Size and layout of pharmacy/dispensing area

# Extreme Pharmacy Makeover

## Know Your Vendor

- Cost of equipment (lease/purchase)
- Space, power and data line requirements
- Upgrade/expandability costs
- Costs for software licenses
- Remodeling requirements
- Costs for interfaces, installation and training
- Ongoing maintenance requirements
- Costs for service and support
- Performance guarantees

# **Extreme Pharmacy Makeover**

**Automation/Technology are Tools**

**Leverage the Pharmacy**

**Differentiate Yourself**

**Link Pharmacy to the Front End**

**Create Patient Care Opportunities**

# Extreme Pharmacy Makeover





Questions?



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