# Optimising the Warehouse

Ged Halstead

Chief Information Officer at CH2

Introduction

- Key Metrics

- About CH2

- About our implementations

- How we have approached optimisation in a GS1 world

- *Some Words of Wisdom*

- *Enjoy the Journey* **– Qantas**

- *Every individual has the power to change the world we live in* **- Earth Hour March 31st at 8.30pm**

- *Raising the bar on patient safety and supply chain efficiency* **– GS1 Healthcare**
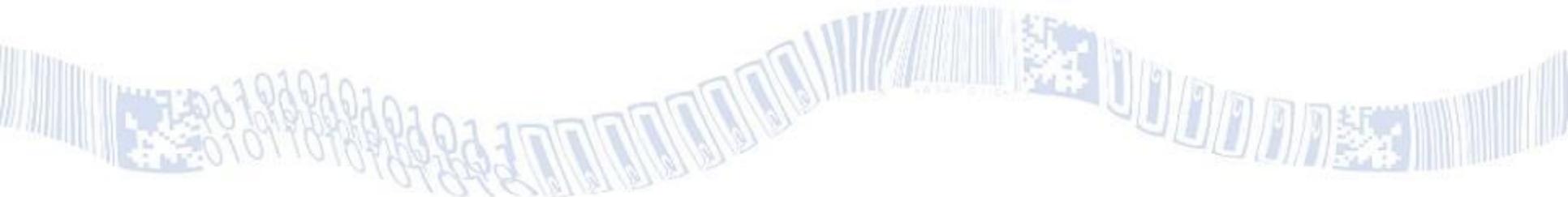
Benefits for CH2
in adopting a standards based approach

- Inventory Accuracy Better than 97%

- Pick accuracy 99.98%

- Fill Rates close to 97%

- 99.89% Pricing accuracy

- Reduction in working capital

- Measure everything – in a position to share these metrics

- Order consolidation and highly evolved transportation management

- Lot Control is actually happening in the wholesaler space

- Playing an active role in participating with supply and demand partners to increase automation, data capture, visibility and standards adoption

CH2 - Our History

- VHA commenced in 1938

- Clifford Hallam Pharmaceuticals (CHP) 1973

- In 1997 VHA became Hospital Supplies Australia (HSA) and implement JDE One World in 2000

- In 2001 API purchased HSA

- In 2005 backed by Private Equity, CHP was merged with HSA and Clifford Hallam Healthcare was formed aka **CH2**

- 2008 CH2 purchased Cottman Australia

- 2010 CH2 acquired Intouch

Today

CH2 is the largest Healthcare supplier in Australia offering a broad range of Pharmaceutical, Medical and Equipment supplies to Hospitals, Primary Care and Allied Health

2012 CH2

CH2.. HOSPITAL

CH2.. PRIMARY CARE

OUR PRIMARY CARE IS YOU

CH2.. intouch DIRECT

AGED & COMMUNITY CARE

DISCREET, CONVENIENT, RELIABLE

CH2.. VET

GREAT SERVICE, EVEN BETTER PRICES

CH2 Sites in Australia

CH2 Transaction Profile

More than 45,000 customers, including;

- 739 Public Hospitals
- 289 Private Hospitals
- 268 Day Surgeries
- Medical Centres and GP's

- 25,000 plus active SKU's
- 320,000 lines delivered per month
- Pick, pack and ship over 3 million units per month
- Order fill rates consistently above 96%.
- DIFOT target is 95%
- Over 40,000 orders per month of which 74% customer orders via an EDI Channel
- Projected revenues around $800m in 2012

Supplier Engagement

E Commerce

- 26 Suppliers trading live with CH2
- Another 27 in either Test or Development Mode

NPC

- 66 suppliers publishing to NPC

This is off a Zero base 5 Years ago

Our Model

Our IT Platform

- JD Edwards Enterprise One 8.11
- Virtualised on VMWare
- IBM X series, EMC SAN
- DSI's DC Link for Radio Frequency (RF)
- Intermec and Datalogic hand held units
- SAP Business Objects for Business Intelligence
- MS SQL Server 2000 and 2005 database
- Oracle on demand for CRM
- Gains for procurement planning
- IBM's Optim for archiving
- Pacific Commerce's Boulevard for Product Information Management
- IBM Websphere Commerce, Websphere enterprise Services Bus and Sterling Integrator

IT Integration & Connectability

- SOS – Simple Ordering System

  - Client based real time integrated and standalone ordering

  - Integrated to I Soft, Merlin, IBA and Fred

- CH2 Direct

  - Easy to use web based

- B2B (NEHTA E Procurement)

  - Full EDI suite via VAN and sFTP or Pharmx –Retail

  - SSCC Labeling

- Supplier enabled interconnections

  - HEN patient registrations and ordering

  - SCA TCMS interfaced

- **CH2 Gateway** (winner of SAP Best BI 2011)

How we use JD Edwards at CH2

- We are running
  - Financials
  - Distribution
  - Advanced Pricing
  - Manufacturing and Planning components
- We are not running
  - Advanced Warehousing
  - JDE Advanced Transportation
- We use middleware to fill in the gaps for
  - Warehousing
  - Order Consolidation & Transportation
  - Carton label Printing
  - Consolidated Packing

Our Journey

Get Ready

- Standards Culture within
  - E Messages
  - GTIN's

Optimise ERP

Implement Radio Frequency

Cleanse Data

Use GTIN's
(Ordering, Procurement & Operationally)

Lay Foundations to use NPC

Get Set

- Prove benefits
  - Productivity
  - Integration Capability
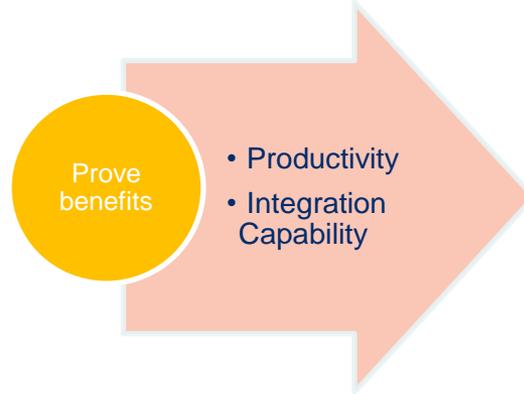
Optimise WMS

Improve Interoperability for partners

Introduce NEHTA E Procurement for Suppliers

Start using NPC

Get Going

- Share the Value
  - Partner wins
  - Innovate
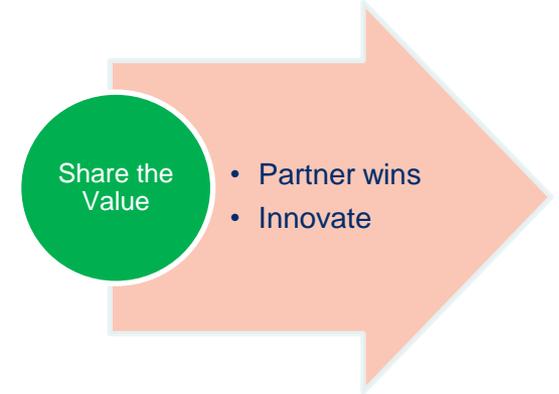
NEHTA E Procurement for Customers

All EDI data exchanged based on NPC data

Scoring Supplier performance

Share the data (Gateway Portal)

Prepare for the changing landscape for Pharmaceutical traceability and Unique Device Identification

Optimising the Warehouse

Our History

- Commenced the RF project with base case ROI on the basic scripts in 2007

- Base case grew from 7 scripts to 55 scripts within 18 months

- Introduced order consolidation then advanced transportation

- Introduced selected customers with Carton level SSCC

Today

- Working on picking directly with carton based SSCC

- Introduction of Pack benches where every customer will get carton level SSCC

- Refining our electronic manifests to be standards based so that more transportation companies can read and use our labels

Learnings

Change

- Needs Leadership, culture and sponsorship

Listen

- The best ideas are given freely

Lead

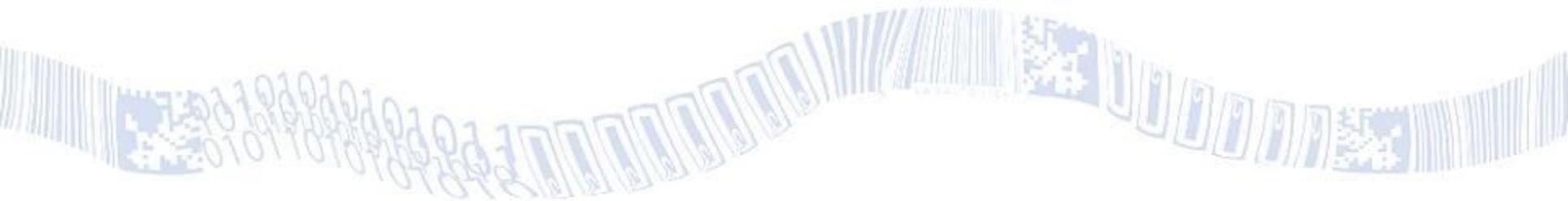- Not everyone wants to 'rock the boat' Be courageous Not crazy

Test

- Implementing GS1 systems is done in a real world and affects your partners. Make sure its Right!

Data at CH2

- You can only improve what you can measure

- We Measure just about Everything

- Our data quality had to improve

- Our data collection had to improve

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Clifford Hallam Healthcare

Daily Backorder Summary for: Tuesday, 28 February, 2012

Product Group	Distinct Item Count	Daily Line Count	Daily Backorder Value	Distinct Item Count	Total Line Count	Total Backorder Value	Planner 1 Backorder Value	Planner 15 Backorder Value	Backorders Older Than 90 Days	Backorders With No Supplier ETA	Count Lines On Pick	Total On Pick Value	Count Fridge Lines On Pick	Fridge Lines On Pick Value
340 - Adelaide			6.75%			9.97%						1.14%		
01 - Pharmacy S100	2	1	3,850.80	5	4	5,872.89	406.23	5,466.66	0.00	0.00	0	0.00	0	0.00
02 - Pharmacy	10	11	5,263.43	93	162	69,313.30	22,126.16	47,187.14	11,662.96	10,358.46	2	3,810.00	1	3,690.00
03 - Medical	33	33	6,750.87	290	344	58,022.93	38,586.24	19,436.70	2,144.33	2,775.84	0	0.00	0	0.00
04 - Equipment	3	2	200.22	37	43	11,997.18	7,399.60	4,597.58	133.05	0.00	0	0.00	0	0.00
05 - 3PL 4PL Pharmacy	2	1	736.20	7	7	17,418.82	0.00	17,418.82	0.00	0.00	0	0.00	0	0.00
06 - 3PL 4PL Medical	2	1	724.50	26	63	8,027.65	1,388.58	6,639.07	11.12	0.00	0	0.00	0	0.00
08 - Veterinary	1	0	0.00	1	0	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00
09 - 3PL 4PL Veterinary	1	0	0.00	1	0	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00
	47	**49**	**17,526.01**	**453**	**623**	**170,652.77**	**69,906.80**	**100,745.97**	**13,951.47**	**13,134.30**	**2**	**3,810.00**	**1**	**3,690.00**
345 - Darwin			0.51%			0.37%						3.88%		
01 - Pharmacy S100	1	0	0.00	1	0	0.00	0.00	0.00	0.00	0.00	1	2,577.60	0	0.00
02 - Pharmacy	3	2	933.96	14	24	2,277.30	1,531.48	745.82	77.94	138.56	6	4,975.60	1	474.00
03 - Medical	5	4	383.88	27	34	3,057.83	2,358.70	699.13	0.00	0.00	9	5,336.48	0	0.00
04 - Equipment	1	0	0.00	1	0	0.00	0.00	0.00	0.00	0.00	1	29.75	0	0.00
05 - 3PL 4PL Pharmacy	1	0	0.00	1	0	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00
06 - 3PL 4PL Medical	1	0	0.00	3	3	1,029.11	9.11	1,020.00	0.00	0.00	0	0.00	0	0.00
08 - Veterinary	1	0	0.00	1	0	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00
09 - 3PL 4PL Veterinary	1	0	0.00	1	0	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00
	7	**6**	**1,317.84**	**42**	**61**	**6,364.24**	**3,899.29**	**2,464.95**	**77.94**	**138.56**	**17**	**12,919.43**	**1**	**474.00**
350 - Brisbane			18.57%			18.68%						12.11%		
01 - Pharmacy S100	1	0	0.00	2	2	459.60	459.60	0.00	459.60	459.60	0	0.00	0	0.00
02 - Pharmacy	21	26	7,541.79	111	299	104,377.72	18,554.32	85,823.41	7,604.33	7,984.99	43	2,475.91	0	0.00
03 - Medical	47	54	7,753.93	272	893	60,953.23	21,245.57	39,707.66	1,127.83	920.71	271	36,950.64	0	0.00
04 - Equipment	3	2	1,867.08	12	12	3,278.74	2,472.05	806.69	0.00	0.00	0	0.00	0	0.00
05 - 3PL 4PL Pharmacy	3	2	29,490.00	4	21	91,641.20	0.00	91,641.20	0.00	0.00	0	0.00	0	0.00
06 - 3PL 4PL Medical	7	7	1,547.70	37	101	58,799.10	648.07	58,151.03	1,574.00	0.00	2	918.80	0	0.00
08 - Veterinary	1	0	0.00	6	5	190.53	45.86	144.68	0.00	0.00	0	0.00	0	0.00
09 - 3PL 4PL Veterinary	1	0	0.00	1	0	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00
	77	**91**	**48,200.50**	**437**	**1,333**	**319,700.12**	**43,425.47**	**276,274.66**	**10,765.75**	**9,365.30**	**316**	**40,345.35**	**0**	**0.00**
370 - Perth			6.58%			13.07%						0.29%		
01 - Pharmacy S100	1	0	0.00	4	3	4,965.04	0.00	4,965.04	0.00	2,182.24	0	0.00	0	0.00
02 - Pharmacy	20	28	10,663.42	114	215	84,316.94	6,764.07	77,552.87	5,436.74	2,879.89	1	0.00	0	0.00
03 - Medical	43	45	5,770.00	322	480	69,392.63	23,488.03	45,904.60	4,732.49	4,340.51	1	196.76	0	0.00
04 - Equipment	3	2	202.60	15	15	2,423.99	2,221.39	202.60	263.25	0.00	0	0.00	0	0.00
05 - 3PL 4PL Pharmacy	1	0	0.00	5	7	38,247.00	0.00	38,247.00	0.00	0.00	1	0.00	1	0.00
06 - 3PL 4PL Medical	4	3	442.45	45	111	18,413.30	2,342.45	16,070.85	2,894.82	72.90	2	779.28	0	0.00
08 - Veterinary	1	0	0.00	42	63	5,830.63	168.76	5,661.87	0.00	2.83	0	0.00	0	0.00
09 - 3PL 4PL Veterinary	1	0	0.00	1	0	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00
	67	**78**	**17,078.47**	**541**	**894**	**223,589.52**	**34,984.69**	**188,604.83**	**13,327.30**	**9,478.37**	**5**	**976.04**	**1**	**0.00**

Clifford Hallam Healthcare

Daily 'SO' Order Statistics By Customer Segment for: Tuesday, 28 February, 2012

Customer Segment		SOS	EDI	CH2 Direct	Phone	Fax	Email	KAM/Cash	SOS	EDI	CH2 Direct	Phone	Fax	Email	KAM/Cash	Other
									February 2012 Month To Date							
Clifford Hallam Healthcare Totals					Number of CH2 Direct Accounts: 4,238											
01 - Public Hospitals	Sales	736,179	62,305	5,595	176,396	333,881	32,361	0	18,019,918	1,497,394	78,324	3,042,265	6,417,161	734,532	189	71,302
	Lines	2,634	262	84	279	1,240	300	0	55,429	5,317	1,325	4,765	19,328	4,633	1	584
02 - Private Hospitals	Sales	116,493	498,013	12,912	26,833	81,092	6,061	182	2,277,093	8,731,428	335,312	360,934	2,181,286	172,249	2,891	14,935
	Lines	930	6,975	161	145	580	51	2	22,673	107,458	2,819	2,296	11,099	1,528	17	150
03 - Aged Care	Sales	7,292	7,603	13,486	15,360	32,834	2,218	0	191,076	204,649	421,794	287,934	711,207	101,952	1,237	7,212
	Lines	122	71	128	94	247	9	0	2,513	1,347	4,766	2,012	4,831	783	8	68
04 - Medical Centers	Sales	19,235	496	21,030	21,879	44,277	7,998	570	464,659	21,689	403,359	629,694	708,539	131,156	37,586	6,219
	Lines	180	22	325	138	172	15	2	4,793	468	4,891	2,853	3,431	290	184	81
06 - Retail Pharmacy	Sales	15,640	0	22,150	108,929	8,070	0	0	572,214	24,335	316,121	2,482,939	101,532	1,212	0	0
	Lines	55	0	34	45	2	0	0	862	8	299	1,003	193	2	0	0
07 - Veterinary	Sales	27,761	0	23,991	1,890	1,004	150	0	243,690	0	567,453	59,269	41,560	28,101	2,303	5,107
	Lines	238	0	358	15	8	2	0	2,969	0	7,994	348	317	156	23	69
08 - Day Surgery	Sales	20,945	18	9,143	1,271	1,747	1,202	0	492,988	2,109	131,197	36,489	71,455	3,687	128	8,122
	Lines	187	1	89	5	26	11	0	4,751	51	1,182	220	630	32	2	66
09 - Allied Health	Sales	1,488	0	2,496	2,114	2,636	1,192	309	64,700	0	41,613	102,521	194,632	18,691	853	651
	Lines	8	0	25	35	15	9	4	528	0	484	544	588	106	14	4
10 - Re-sellers	Sales	17,829	0	5,635	30,043	71,645	1,684	0	898,268	627	130,807	367,959	3,487,525	594,097	274,264	2,376
	Lines	90	0	23	24	136	12	0	1,971	1	501	483	2,652	755	4	8
11 - Mining & Industry	Sales	0	0	44	1,661	524	0	0	0	0	1,892	40,416	12,146	11,359	0	0
	Lines	0	0	1	8	1	0	0	0	0	34	156	58	11	0	0
12 - Home Patients	Sales	0	155	0	13,004	6,704	3,321	0	0	3,654	0	284,529	133,775	123,928	116	3,287
	Lines	0	2	0	173	40	35	0	0	37	0	3,699	809	890	3	27
13 - Retail Hospital Pharma	Sales	132,858	3,025	3,249	5,937	1,914	0	0	1,780,490	243,246	54,510	342,691	178,221	2,248	0	166
	Lines	207	46	13	4	1	0	0	3,362	1,017	153	73	174	11	0	1
14 - Other	Sales	0	0	0	1,657	5,330	12	0	0	0	0	89,049	50,164	43,694	170	720
	Lines	0	0	0	5	2	1	0	0	0	0	216	54	48	9	1
15 - Community Health	Sales	355	869	3,467	33,749	2,067	1,443	0	40,844	31,570	50,162	716,884	39,109	69,705	166	484,536
	Lines	11	10	27	430	16	5	0	587	258	687	7,465	267	365	1	3,263
	Sales	1,096,085	572,484	123,196	440,721	593,725	57,642	1,051	25,045,938	10,760,702	2,532,543	8,843,574	14,328,314	2,036,609	319,905	604,634
	Lines	4,662	7,389	1,268	1,400	2,486	450	8	100,438	115,962	25,135	26,133	44,431	9,610	266	4,322
	Percentage	25.20%	39.95%	6.86%	7.57%	13.44%	2.43%	0.04%	30.78%	35.54%	7.70%	8.01%	13.62%	2.95%	0.08%	1.32%

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Clifford Hallam Healthcare

### *Daily CH2 Direct Activity Audit Report for: Tuesday, 28 February, 2012*

	Logins	Unique Logins	Searches	Search With Cat	Edit Details	Orders	Logins	Unique Logins	Searches	Search With Cat	% With Cat	Edit Details	Orders
							February 2012 Month To Date						
Aged Care	59	42	338	63	6	26	1,510	339	9,713	757	7.79%	183	701
Hospital	158	91	999	12	9	50	2,951	411	18,071	236	1.31%	175	789
Primary Care	81	57	548	28	3	24	1,561	365	11,547	624	5.40%	383	550
Veterinary	52	42	564	29	0	24	1,566	164	15,578	997	6.40%	110	561
310 - Melbourne	89	51	485	6	0	25	1,801	263	11,265	436	3.87%	52	665
315 - Hobart	9	7	43	0	0	3	254	56	1,568	66	4.21%	14	93
330 - Sydney	98	72	861	93	6	44	2,155	299	16,238	1,078	6.64%	193	710
335 - Newcastle	43	29	291	23	1	15	778	201	5,557	313	5.63%	55	258
340 - Adelaide	45	31	204	2	2	17	1,074	187	6,179	237	3.84%	339	329
345 - Darwin	2	1	1	0	0	0	10	5	28	0	0.00%	1	0
350 - Brisbane	40	23	351	8	8	9	809	165	5,773	277	4.80%	148	271
370 - Perth	24	18	213	0	1	11	707	103	8,301	207	2.49%	49	275
Company Totals	**350**	**232**	**2449**	**132**	**18**	**124**	**7588**	**1,279**	**54909**	**2614**	**4.76%**	**851**	**2601**

Yesterday Activity By Hour
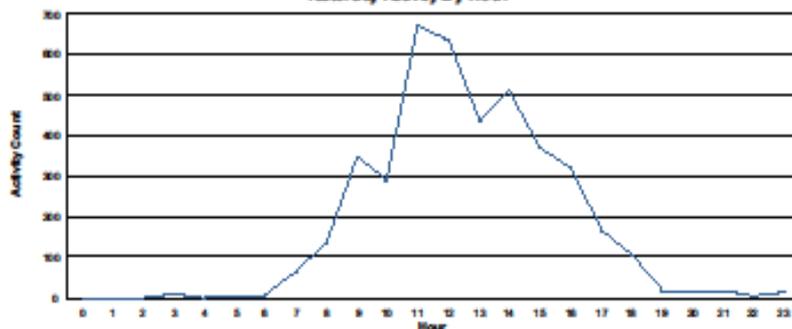
Month To Date Activity By Hour
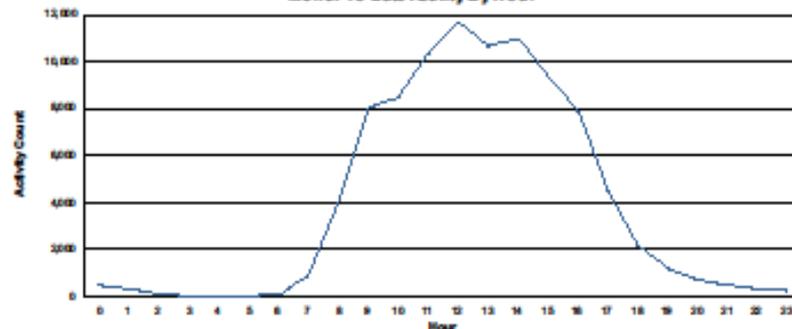
Yesterday Top 10 Searched Words

Search Words	Aged Care	Hospital	Primary Care	Veterinary	Total Count
gloves	8	26	1	1	36
catheter	21	0	0	0	21
GOWN	0	15	0	0	15
catheter packs	10	0	0	0	10
glove	0	8	2	0	10
hartmans	0	1	2	7	10
gauze	0	0	9	0	9
1234919	0	7	1	0	8
1411676	0	0	8	0	8
accuchek soft clix lanc	8	0	0	0	8

Month To Date Top 10 Searched Words

Search Words	Aged Care	Hospital	Primary Care	Veterinary	Total Count
royal canin	0	0	0	368	368
hills	0	0	0	292	292
syringe	53	51	43	111	258
gloves	88	69	68	23	248
sodium chloride	27	56	75	30	188
dental	0	0	3	164	167
advocate	0	0	0	164	164
catheter	104	45	3	7	159
allevyn	70	36	37	0	143
terumo	24	43	34	40	141

Benefits for CH2
in adopting a standards based approach

- Inventory Accuracy Better than 97%

- Pick accuracy 99.98%

- Fill Rates close to 97%

- 99.89% Pricing accuracy

- Reduction in working capital

- Measure everything – in a position to share these metrics

- Order consolidation and highly evolved transportation management

- Lot Control is actually happening in the wholesaler space

- Playing an active role in participating with supply and demand partners to increase automation, data capture, visibility and standards adoption

THANK YOU FOR YOUR TIME

Contact Details

For more information on CH2 please visit our website www.ch2.net.au

or our

National Customer Service 1300 720 274