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ADDENDUM A: ABOUT COZAAR

COZAAR® (losartan), COZAAR COMP® and FORTZAAR™, a combination of losartan and hydrochlorothiazide (a diuretic) are antihypertension medications in a class called angiotensin II antagonists (AIIA).

Hypertension is a risk factor or precursor for a wide range of cardiovascular (CV) conditions.[1,2] While the exact cause of hypertension has not been determined, much attention has been focused on a series of reactions following the release by the kidney of the enzyme renin. Renin activates a chain reaction leading to the formation of a substance called angiotensin II, which stimulates an array of effects on the structure of blood vessels, heart and other body tissues. Angiotensin II is a potent vasoconstrictor that also mediates the retention of sodium and water.[2,3]

COZAAR works by blocking the receptors of angiotensin II, thus preventing vasoconstriction and other hypertensive effects.

- COZAAR is approved for use in 94 countries for the treatment of hypertension.
- COZAAR and COZAAR COMP are the most widely prescribed AIIA medications.
- COZAAR and COZAAR COMP are already the second highest selling branded antihypertensives worldwide.
- COZAAR and COZAAR COMP have been prescribed for 12 million patients worldwide.

COZAAR is the most widely studied medication in its class. COZAAR has been the focus of four clinical mega-trials in more than 18,000 patients and the subject of approximately 4500 scientific publications[4-8].

CLINICAL RESULTS AND BLOOD PRESSURE EFFICACY

COZAAR and COZAAR COMP have provided excellent results in lowering blood pressure. In controlled trials, COZAAR lowered blood pressure comparable to other classes of antihypertensive therapy, including ACE inhibitors, calcium-channel blockers, beta blockers and diuretics. The results of a pooled meta-analysis of 51 published, randomized, controlled trials showed that COZAAR is highly effective in controlling blood pressure comparable to other angiotensin II antagonists.[13] Other studies have shown that COZAAR provided consistent 24-hour blood pressure reduction.[14,15]

Recent results of the landmark LIFE study (Losartan Intervention For Endpoint reduction in hypertension study) showed that in patients with hypertension and left ventricular hypertrophy COZAAR significantly reduced the primary endpoint of combined risk of CV death, myocardial infarction and stroke by 13% (p= 0.021) versus the beta blocker atenolol.* Additionally COZAAR reduced the risk of stroke by 25% versus atenolol (p=0.001).[7] Stroke is an important consequence of hypertension.[16]

Recent results of the landmark RENAAL study[8] (Reduction of Endpoints in Non-Insulin Dependent Diabetes Mellitus and nephropathy with the Angiotensin II Antagonist Losartan) showed that COZAAR plus conventional therapy (CT: diuretics, calcium-channel blockers, and/or centrally acting agents) demonstrated renal benefits: a significant 16% reduction in the primary composite endpoint of risk of death, doubling of serum creatinine concentration, or end-stage renal disease (ESRD**) (p=0.02). In addition, COZAAR was also superior in reducing the risk of ESRD by 28% vs. conventional therapy (p=0.002). A cardioprotective effect was also evident in the significant 32% reduction in risk of first hospitalization for heart failure with COZAAR (p=0.005). Diabetes is the leading cause of chronic kidney failure or ESRD in many countries.[8]

SAFETY AND TOLERABILITY PROFILE

Many hypertension treatments produce side effects that cause patients to discontinue treatment. A major and consistently observed advantage of COZAAR and COZAAR COMP is their excellent tolerability (or low incidence of side effects) giving physicians confidence that patients will stay on therapy and get the benefit of their treatment.[7,9-12,15]

ABOUT COZAAR REFERENCES:

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therapy in patients with mild to moderate hypertension. *Clin Ther* 2000;22(10):1186-1203.

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ADDENDUM B: THE COZAAR e-PILOT – ALL YOU NEED TO KNOW!

About the COZAAR e-Detailing Workshop

- The use of rich text editor, GUI (Graphical User Interface) enhanced presentation.
- Web browsers, online communication availed tremendous amounts of information on just a click of mouse.
- The audio-visual description, interaction with world–over-experienced faculties and various stimulation models provided a better understanding of the marketing / medical material.
- The ideal participation of eye, ear, and hand along with precise intellectual judgment ensured that the COZAAR e-Pilot optimised the marketing effort.
- The use of graphic resources like Flash animations provided the best most exciting way to deliver promotional and educational messages.

How the application worked

Contents structure

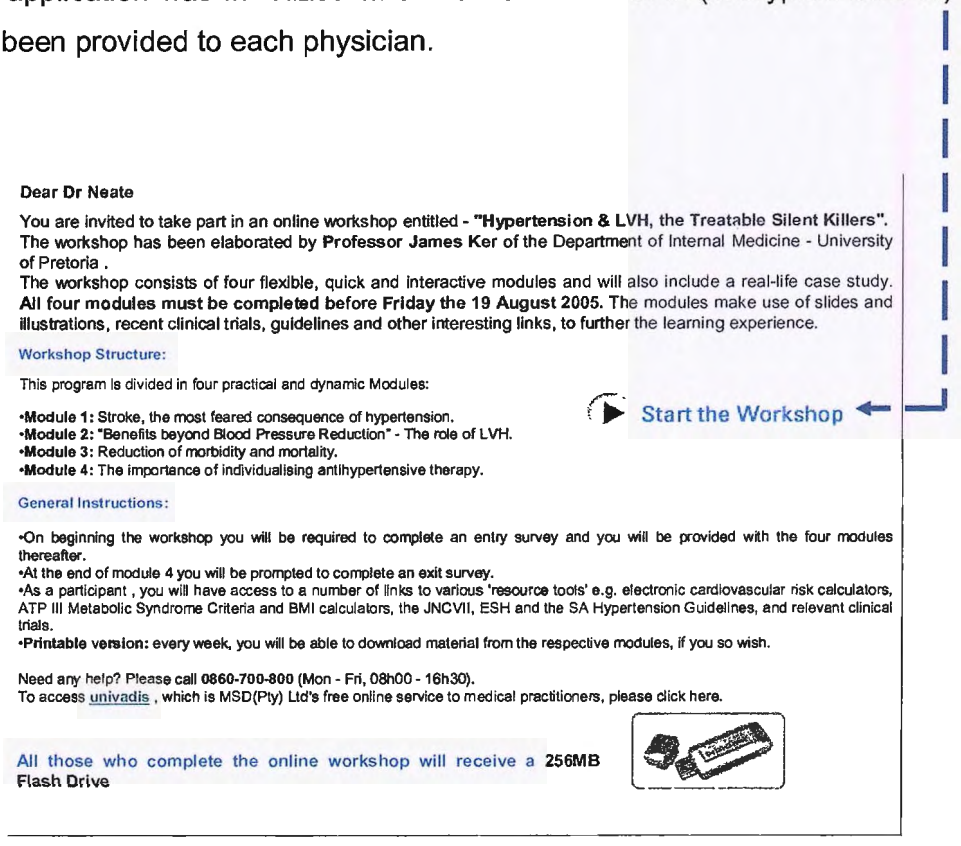
The contents of the e-Detail pages were laid out in .dat files. The .dat files were stored on Softmed's servers as part of the application. This way of structuring the information allowed for or a higher level of security as well as for a faster navigation through the site.

Database structure

The database organized the e-Detailing contents in a tree structure. The process by which .dat files were viewed, depended on both the predefined structure of the modules and previous decisions of the user. The database also included security information that governed which pages, tools and links were made accessible to respective users and at what times, depending on MSD's requirements. The database used was the MySQL 3.23.54 release, and resided on the Softmed server with the rest of the application.

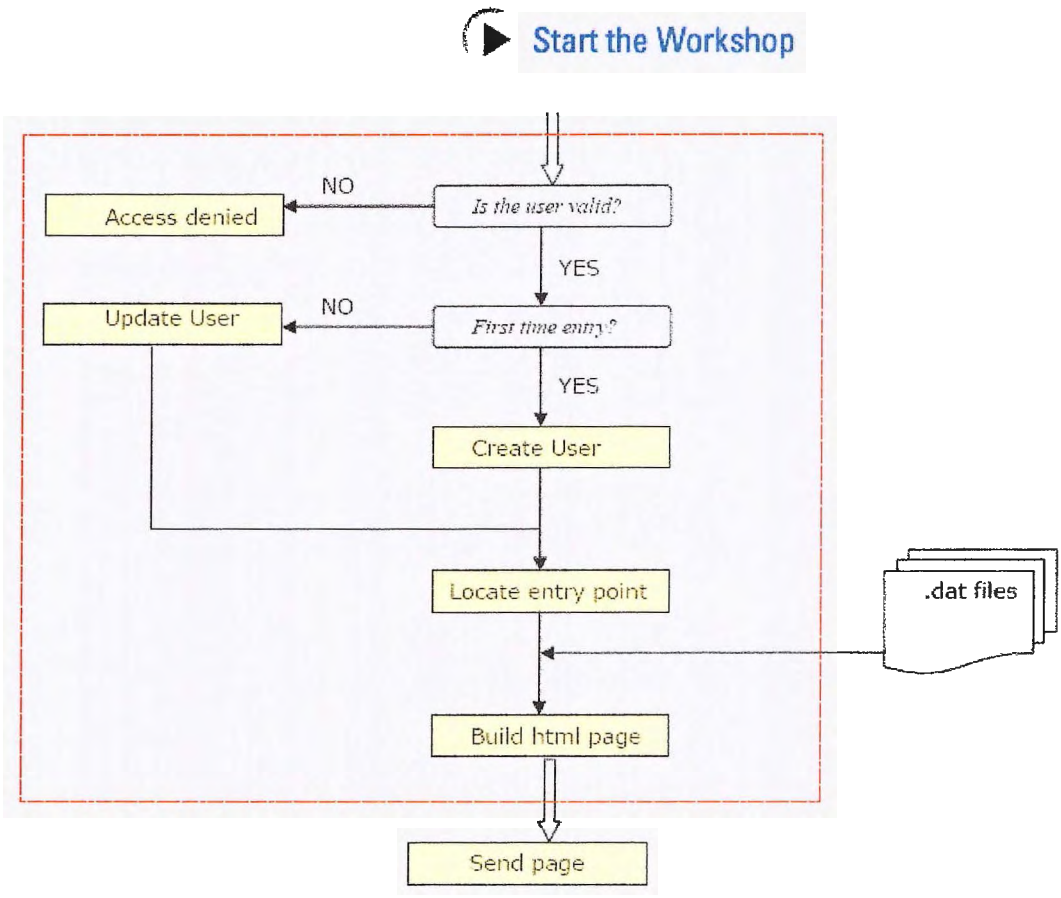
Putting it all together

The application was initialized when called from a URL (encrypted user Id) that has been provided to each physician.



Softmed's application received this request and followed the following steps:

- The application checked the database to validate the user Id.
- Once affirmed the user was created on the first visit or it was updated on follow-up visits.
- The corresponding point of entry inside the workshop was located.
- Needed .dat files were retrieved and mounted together in order to construct the final html result that the user could see.
- The server then sent the resulting page to the user.



Connection requirements for the user

MSD's e-Detailing Pilot application functioned as a normal web application. Because the data flow was not especially high; normal connection to the internet and a Internet Explorer 6.0 or higher compatible browser allowed the users to navigate their way through the e-Detailing modules without a problem. However, depending on the multimedia contents of the e-Detailing modules (images, flash, sound files) and slower connections (bellow 128kps), it took some users a longer time to work through the e-Detailing modules.

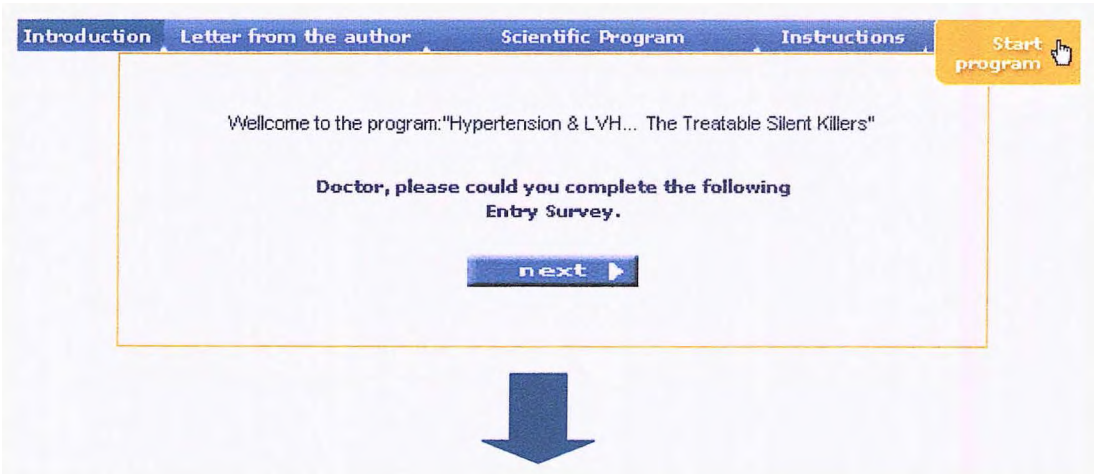
Softmed's Server description and security

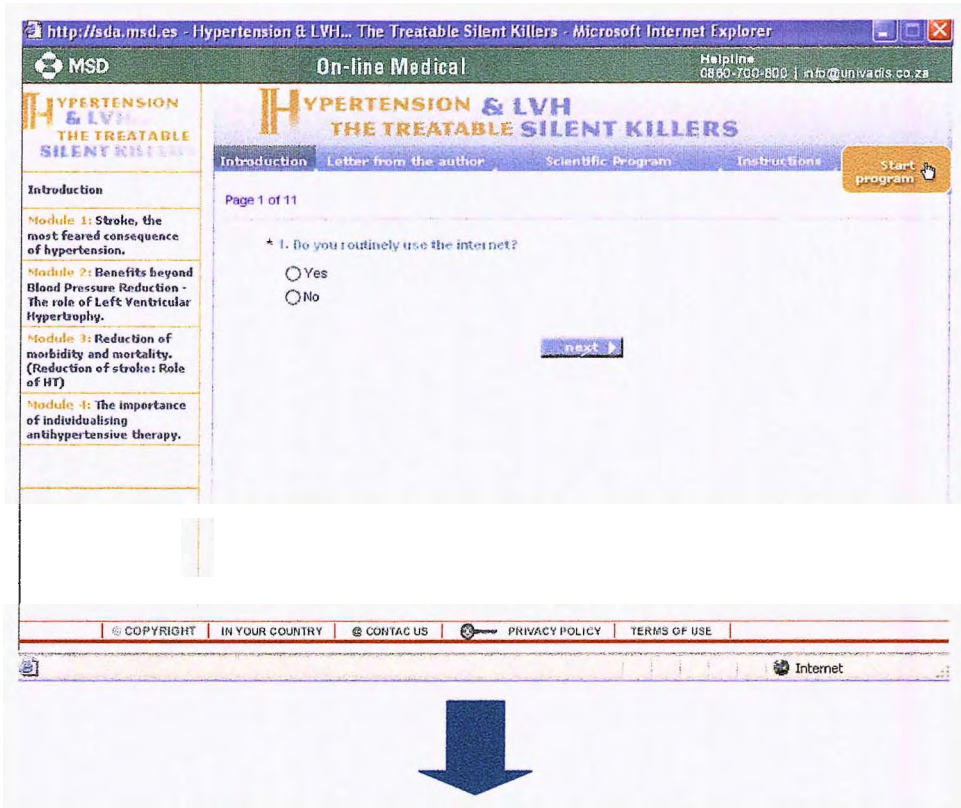
The application was located on a Linux Red Hat O.S server with Apache as the Web server. Softmed's application was able to support 15,000 concurrent users, which was far beyond the number of users in their database.

The application transferred data through standard http protocol, and data security was provided by the application itself. The way the pages were constructed by the PHP code gave the application full control over users trying to obtain any page not allowed for them by the database, as well as a top level of protection against possible hacking attempts. Besides the navigation logs provided by Apache, the application tracked all users activities generating its own statistical reports, which were downloaded from the Softmed server by MSD on a weekly basis.

E-Detailing Entry Survey

Before users were able to access the e-Detailing modules they were prompted to complete the online survey which consisted of 3 IT questions and 8 clinical (market research) questions. Once the entry survey was completed users were prompted to start module 1.





* 1. Do you routinely use the internet?

- ◯ Yes
- ◯ No

next

* 2. Would you use the internet to conduct medical research?

- ◯ Yes
- ◯ No

next

* 3. How many hypertensive patients do you see in a week?

next

* 4. What percentage of your hypertensive patients are currently using:

- [x] Diuretics
- [x] Beta-Blockers
- [x] Calcium Channel Blockers
- [x] ACE Inhibitors
- [x] Angiotensin Receptor Blockers

next

* 5. When treating hypertension what is your objective?

- ◯ To reduce arterial blood pressure
- ◯ To reduce / modify CV risk factors
- ◯ To prevent Target Organ Damage
- ◯ All of the above

next

* 6. What is in your opinion the most common complication / consequence of hypertension?

- ◯ Myocardial Infarction
- ◯ Stroke
- ◯ Renal failure

next

* 7. Do you routinely screen for Left Ventricular Hypertrophy (LVH)?

- ◯ Yes
- ◯ No

next

* 8. Do you consider LVH to be a strong predictor for Stroke?

- ◯ Yes
- ◯ No

next

* 9. Which antihypertensive has the most compelling evidence to support their use in the treatment of hypertensive patients with LVH?

- ◯ Beta-Blockers
- ◯ Calcium Channel Blockers
- ◯ ACE Inhibitors
- ◯ Angiotensin Receptor Blockers

next

* 10. In stroke prevention, which molecule offers advantages over traditional therapy (betablockers/diuretics) in the prevention of stroke?

- ◯ Losartan
- ◯ Candesartan
- ◯ Captopril
- ◯ Nifedipine

next

* 11. Which of the following are identified in the SA Hypertension Guidelines as compelling indications for the first line use of an Angiotensin Receptor Blocker

- ◯ Angina
- ◯ Prior MI or Coronary Artery Stenosis
- ◯ Left Ventricular Hypertrophy (confirmed by ECG)
- ◯ Diabetes Type 1 or 2 with or without microalbuminuria or Proteinuria
- ◯ Isolated Systolic Hypertension
- ◯ answers 3 and 4 are correct

next

Your Entry Survey has been successfully completed.

Thank you for your participation in the program:

"Hypertension & LVH... The Treatable Silent Killers"

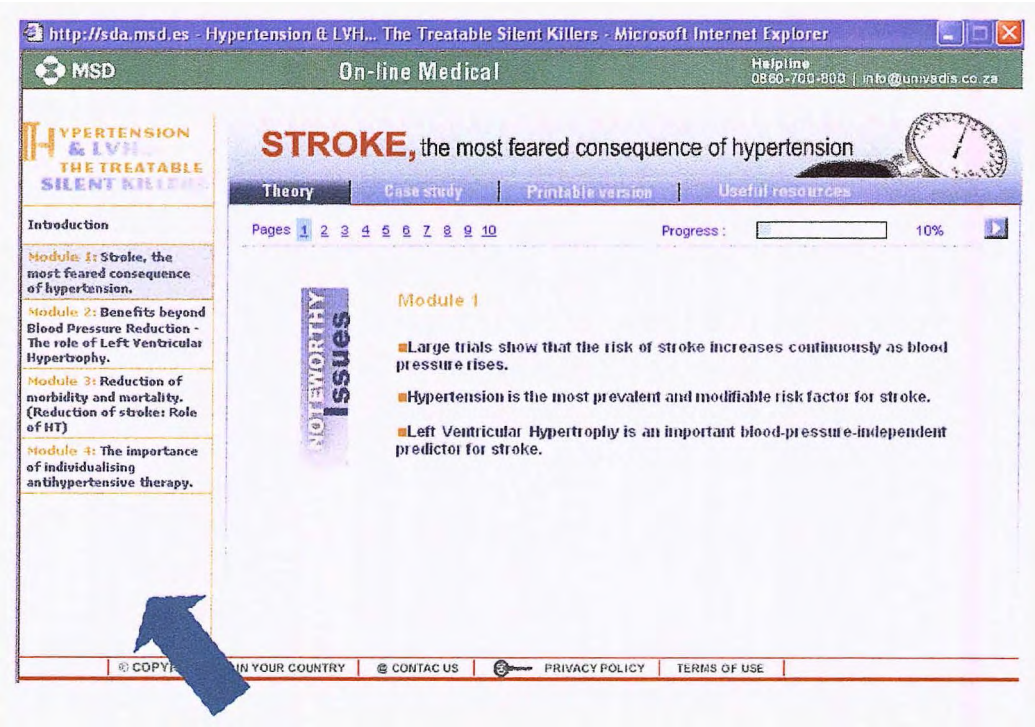
Please, click on Module 1 on the left of the screen.

E-Detailing Modules

With this system, MSD was able to give physicians a complete workshop of detailing integrated with continuous medical training. They were given the

opportunity to learn more about hypertension, LVH and stroke; with no time or place restrictions. More importantly MSD was able to increase the reach and frequency of COZAAR's promotional messages in line with strategy with no time or place restrictions.

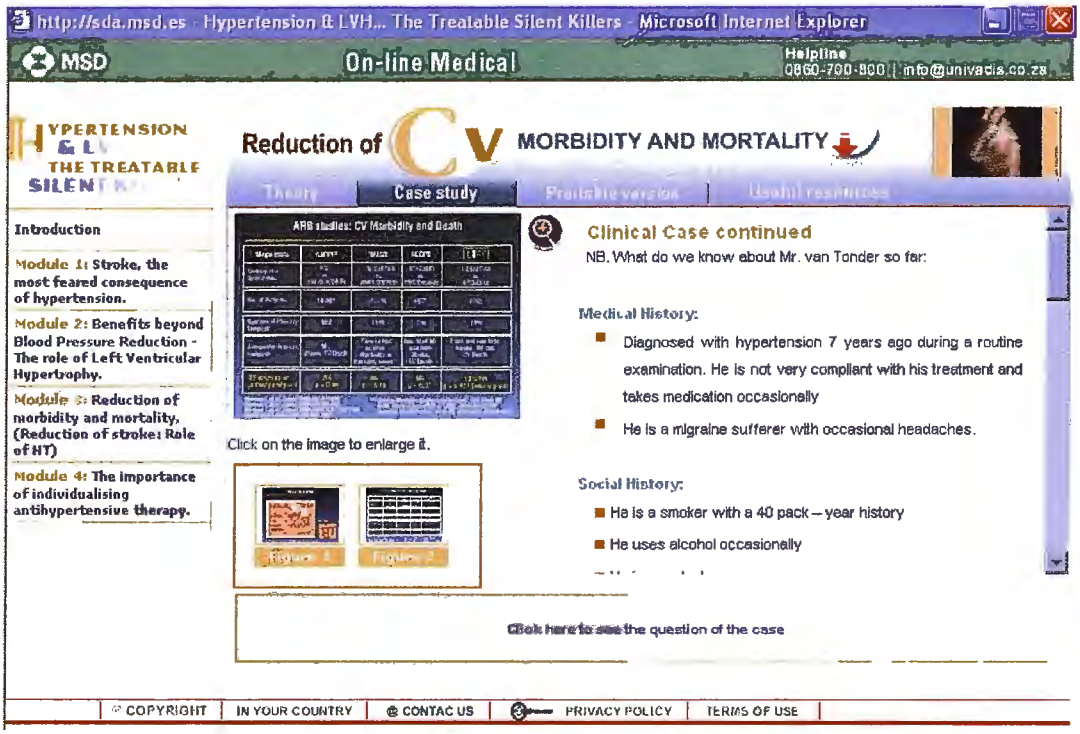
In this system, the detail content was divided into several parts – modules. Each module consisted of several detail pages, and all of them include text and graphic resources - images, animations, video clips and flash applications that enhanced the e-Detailing experience for the users.

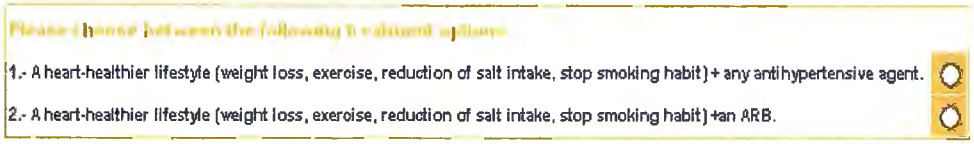


The COZAAR e-Pilot was divided into 4 details (detail modules). Each detail module was designed to replace what would traditionally constitute a high quality (optimal) rep visit. So in actual fact the COZAAR e-Pilot offered 4 details to physicians over a 4 week period. Using traditional call strategies, this would take > 6 months to achieve.

Physicians were able to access each detail module by clicking on the respective link, however, only once they finished the detail module (all pages have been

viewed and the integrated case study completed), could the user access the next detail module. While the users worked on the detail modules, they were able to track their progress on the progress bar. After completing a detail module physicians were prompted to read a case study and answer a question at the bottom of the page.





This was then followed by a case summary with recommendations which was prepared by Professor Ker of the University of Pretoria. This summary essentially reinforced the MSD view.


http://sda.msd.es - Hypertension & LVH... The Treatable Silent Killers - Microsoft Internet Explorer
MSD
On-line Medical
Helpline
0860-700-800 | info@univadis.co.za
HYPERTENSION & LV
THE TREATABLE
SILENT
Introduction
Module 1: Stroke, the most feared consequence of hypertension.
Module 2: Benefits beyond Blood Pressure Reduction - The role of Left Ventricular Hypertrophy.
Module 3: Reduction of morbidity and mortality. (Reduction of stroke: Role of HT)
Module 4: The importance of individualising antihypertensive therapy.
STROKE, the most feared consequence of hypertension
Theory
Case study
Printable version
Useful resources
COMMENTS on the Management of the Clinical Case
- with MODULE 1 – learnings in mind
Calculating the Global absolute Risk of this patient, using the CV Risk Calculator is necessary.
This is clearly a hypertensive patient with a very high likelihood of increased absolute risk to develop a cardiovascular event in the next 5-10 years.
High blood pressure
CV risk factors; male , > 55 years, smoker, abnormal lipids
Possible target organ damage in the form of LVH (but to properly assess, we will need an ECG or an echocardiogram)
next
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MSD
On-line Medical
Helpline
0860-700-800 | info@univadis.co.za
HYPERTENSION & LV
THE TREATABLE
SILENT
Introduction
Module 1: Stroke, the most feared consequence of hypertension.
Module 2: Benefits beyond Blood Pressure Reduction - The role of Left Ventricular Hypertrophy.
Module 3: Reduction of morbidity and mortality. (Reduction of stroke: Role of HT)
Module 4: The importance of individualising antihypertensive therapy.
"Benefits beyond Blood Pressure Reduction"
The role of Left Ventricular Hypertrophy
Theory
Case study
Printable version
Useful resources
Pages 1 2 3 4 5 6 7 8 9 10 11
Progress :
100%
KEY WORTHY ISSUES
Module 2
What is Left Ventricular Hypertrophy?.
The causes, diagnosis and consequences of Left ventricular Hypertrophy.
The effect of reducing Left ventricular Hypertrophy.
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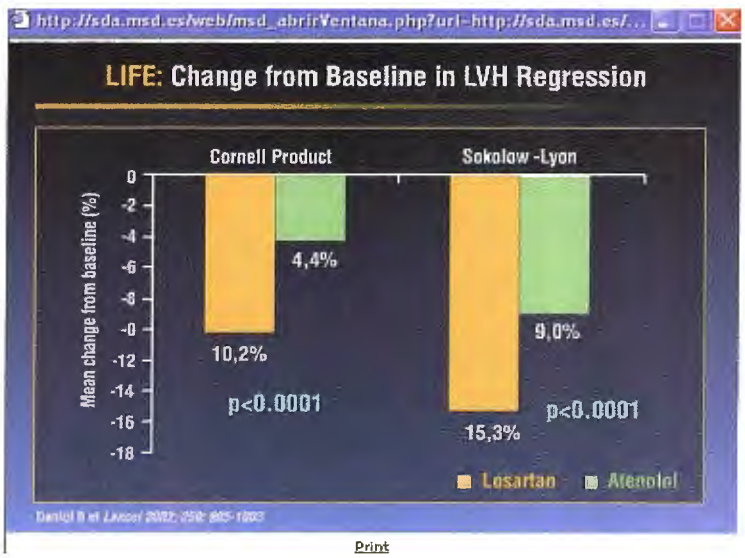
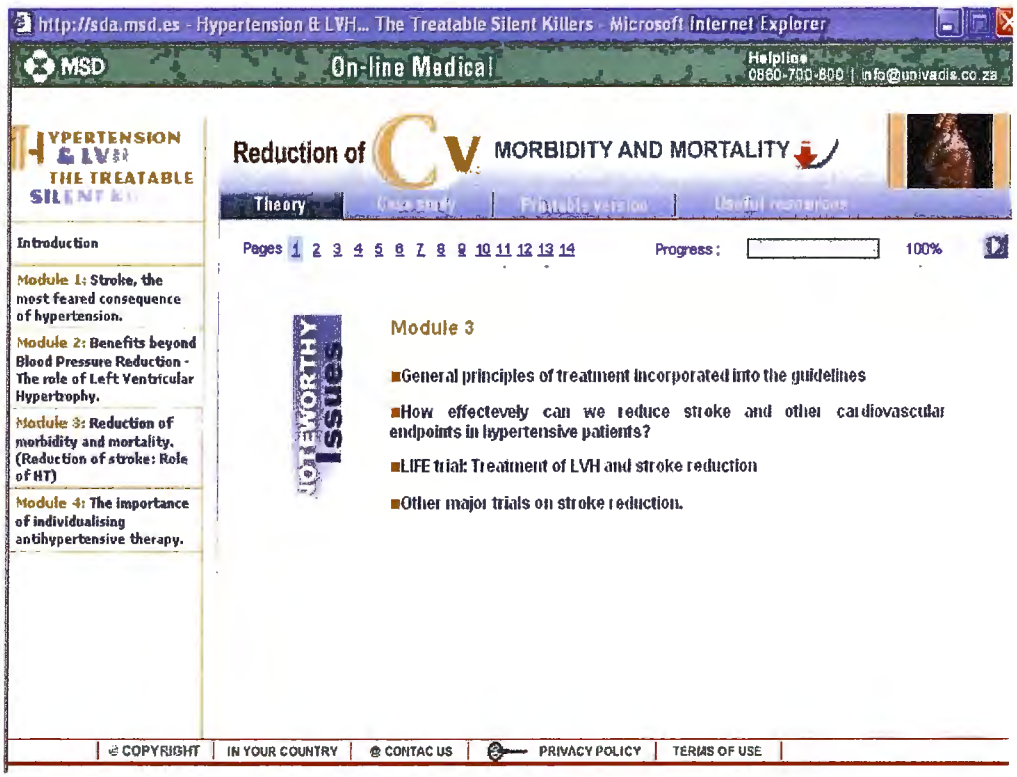
Physicians were able to access useful resources to enrich the e-Detailing experience. Useful resources included useful links and useful downloads. Useful links included links to other sites and e-Tools like electronic Stroke / Metabolic Syndrome and BMI diagnostic calculators.



Useful downloads included downloadable versions of Clinical Trials and Slide Shows. Physicians were also able to access and print many of the graphic resources by clicking on the images.


http://sda.msd.es - Hypertension & LVH... The Treatable Silent Killers - Microsoft Internet Explorer
MSD
On-line Medical
Helpline
0860-700-800 | info@univadis.co.za
Reduction of CV MORBIDITY AND MORTALITY
Theory
Pages 1 2 3 4 5 6 7 8 9 10 11 12 13 14
Progress :
100%
Introduction
Module 1: Stroke, the most feared consequence of hypertension.
Module 2: Benefits beyond Blood Pressure Reduction - The role of Left Ventricular Hypertrophy.
Module 3: Reduction of morbidity and mortality. (Reduction of stroke: Role of HT)
Module 4: The importance of individualising antihypertensive therapy.
Module 3
General principles of treatment incorporated into the guidelines
How effectevely can we reduce stroke and other cardiovascular endpoints in hypertensive patients?
LIFE trial: Treatment of LVH and stroke reduction
Other major trials on stroke reduction.
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http://sda.msd.es - Hypertension & LVH... The Treatable Silent Killers - Microsoft Internet Explorer
MSD
On-line Medical
Helpline
0860-700-800 | info@univadis.co.za
Theory
Pages 1 2 3 4 5 6 7 8 9 10 11
Progress
100%
Introduction
Module 1: Stroke, the most feared consequence of hypertension.
Module 2: Benefits beyond Blood Pressure Reduction - The role of Left Ventricular Hypertrophy.
Module 3: Reduction of morbidity and mortality. (Reduction of stroke: Role of HT)
Module 4: The importance of individualising antihypertensive therapy.
Module 4
What are compelling indications?
The ESH Guidelines
The JNC VIII Guidelines
The South African Treatment Guidelines (SAHTG).
Other major trials on stroke reduction.
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TERMS OF USE

E-Detailing Exit Survey

Following the completion of module 4, physicians were then prompted to complete the exit survey which consisted of 7 questions which were essentially Q4 through to Q10 of the entry survey. In this way MSD could track change trends to determine whether or not e-Detailing had an influence over physicians perceptions and behaviour.

Statistics

For each user of the system that accesses the workshop, this e-Detailing system allowed us to access statistics about:

- Number of access to partners
- Answers to the entry questionnaire
- Answers to the final questionnaire
- Change trends in the responses to these questionnaires
- Date of entry & Date of exit
- Date of first entry to useful resources
- Date of the first access to the exercise
- Results of the responses to questions relating to the clinical case

Statistical Analyses

Concerning the workshop as a whole:

- Number of physicians who took part in the workshop
- Number of physicians who finished the workshop
- Minimum, maximum and average time from workshop start-up until first physician logged-in
- Identification of first and last physicians logged-in
- Minimum, maximum and average time of workshop fulfilment (out of those who completed it)
- Top ten interesting links

The associated tasks would be as follows:

- Data integration and statistical programming (SAS® 9.1)

ADDENDUM C: PHYSICIAN PARTICIPATION (SAS OUTPUT)

SURVEYS
Group=1 - E-module only

Group	MSDID	Names	Entry date	entry	Exit date	exit
1 - E-module only	0170640MP	Pharoah, Noel	2005-08-01T15:20:35	1	2005-09-15T18:25:17	1
	0228613MP	Dr Z Botes	2005-08-10T15:29:46	1	2005-08-30T16:46:48	1
	0231401MP	Lingenfelder, JE	2005-09-13T20:53:09	1	2005-09-15T23:08:38	1
	0260975MP	Dr W.Watson	2005-07-21T06:17:33	1	2005-07-22T06:53:25	1
	0293504MP	Dr Wa Botha	2005-09-15T10:21:38	1	2005-09-15T11:56:26	1
	0322105MP	Dr HF Swart	2005-09-05T20:06:27	1	2005-09-15T21:45:51	1
	0344192MP	V Steenkamp	2005-07-25T21:15:42	1	2005-08-01T21:22:57	1
	0350907MP	Dr E Viljoen	2005-07-21T11:46:18	1	2005-07-22T13:26:33	1
	0378798MP	Theron, WJ	2005-08-02T15:27:52	1	2005-08-12T16:29:48	1
	0411108MP	Dr Hugo L	2005-09-17T15:49:24	1	2005-09-18T22:32:10	1
	0434620MP	Dr S Garib	2005-08-06T15:17:49	1	2005-09-15T19:22:40	1
	MP0044784	Mr Cecil Weintrau	2005-09-09T21:48:38	1	.	.
	MP0053368	Dr george simons	2005-09-01T08:49:13	1	2005-09-20T15:06:41	1
	MP0058793	Dr israel abramow	2005-08-30T21:51:29	1	2005-08-30T23:31:41	1
	MP0059773	Dr Mohammed Meer	2005-08-24T17:11:48	1	2005-08-24T18:23:30	1
	MP0086460	Dr Peter Comfort	2005-09-03T17:50:16	1	2005-09-04T20:28:13	1

Group	MSDID	Names	Entry date	entry	Exit date	exit
	MP0096725	Dr Denis Duval	2005-08-24T20:59:12	1	2005-08-26T22:30:05	1
	MP0108138	Dr Louw Du Toit	2005-09-05T16:37:13	1	2005-09-14T23:25:55	1
	MP0118249	Dr Julius Gustaf	2005-08-24T19:43:15	1	2005-08-28T19:29:40	1
	MP0124206	Dr Henry Matthews	2005-08-26T22:11:01	1	2005-08-27T23:00:42	1
	MP0125296	Dr sam muller	2005-08-24T16:14:22	1	.	.
	MP0156400	Dr THOMAS ALBERT	2005-08-14T15:30:02	1	2005-08-25T10:47:03	1
	MP0166022	Dr SASHIKANT MOHA	2005-08-26T00:56:26	1	.	.
	MP0187135	Dr Yusuf Mahomedy	2005-08-26T23:52:11	1	2005-08-27T03:44:05	1
	MP0201570	Dr Roger Pool	2005-08-15T13:35:06	1	2005-08-24T16:50:07	1
	MP0214124	Dr Mahomed Ebrahi	2005-08-29T12:59:30	1	.	.
	MP0217930	Dr Marius Coetzee	2005-09-06T12:05:16	1	2005-09-06T14:05:54	1
	MP0218278	Dr PIERRE DE VILL	2005-08-17T18:41:28	1	2005-08-24T20:11:56	1
	MP0231339	Dr edward Lee Pan	2005-08-12T17:53:45	1	2005-08-26T11:21:20	1
	MP0245291	Dr Ernst Eiselen	2005-08-18T11:02:27	1	2005-08-27T21:25:51	1
	MP0252832	Dr Yahya Nana	2005-09-01T15:48:15	1	.	.
	MP0261254	Dr Rajesvaran Nad	2005-08-18T15:09:26	1	2005-08-30T21:36:05	1
	MP0266175	Dr Arie Unger	2005-08-16T23:53:03	1	2005-08-25T00:20:28	1
	MP0290343	Dr Julian Jacobs	2005-08-31T19:19:16	1	2005-09-17T16:18:33	1

Group	MSDID	Names	Entry date	entry	Exit date	exit
	MP0320528	Dr Gideon Johan v	2005-08-26T10:42:08	1	.	.
	MP0327751	Dr Sharon Miller	2005-08-25T19:59:27	1	2005-09-05T19:50:46	1
	MP0378798	Dr willem theron	2005-08-16T10:55:47	1	2005-08-25T12:08:31	1
	MP0428906	Dr Deb Basu	2005-09-01T17:19:33	1	.	.
	MP0439878	Dr Remy Toko	2005-08-25T13:46:20	1	2005-09-02T09:04:57	1
	MP0441619	Dr Lazaro Rodrigu	2005-08-09T07:58:37	1	2005-08-25T08:23:24	1
	MP0483486	Dr ravindra sirka	2005-08-24T20:42:50	1	2005-08-25T12:20:37	1
	MP0488968	Dr Richard Sykes	2005-08-24T20:59:05	1	2005-08-25T21:26:14	1
	MP0503339	Dr Janeke Van Der	2005-08-30T15:58:33	1	2005-09-01T11:09:09	1
	MP0525472	Dr. E. Hamman	2005-07-27T14:16:38	1	.	.
1 - E-module only				44		36

SURVEYS

Group=2 - E-module & call

Group	MSDID	Names	Entry date	entry	Exit date	exit
2 - E-module & call	0211893MP	Dr M Roux-Benoni	2005-09-07T09:51:51	1	2005-09-18T21:58:01	1
	0248894MP	Dr M.V Ravjee	2005-09-03T10:31:30	1	2005-09-18T23:45:40	1
	0304859MP	Dr P Marais-Beno	2005-09-07T10:45:33	1	2005-09-18T23:38:09	1
	MP0082180	Dr Koos Greyling	2005-08-24T15:40:44	1	2005-08-29T10:37:34	1
	MP0104523	Dr Le Roy Lategan	2005-08-12T03:12:50	1	2005-08-25T04:55:52	1
	MP0134791	Dr CJ (Neil) Cron	2005-08-25T06:20:27	1	2005-08-28T15:14:33	1
	MP0146943	Dr Pat Crossley	2005-08-17T08:58:23	1	2005-08-27T09:24:23	1
	MP0160806	Dr David CAMERON	2005-08-13T17:15:26	1	2005-08-25T18:17:36	1
	MP0161314	Dr saville furman	2005-08-14T23:39:49	1	2005-08-25T23:33:03	1
	MP0179329	Dr piet barnard	2005-08-25T21:30:11	1	2005-08-25T22:27:39	1
	MP0184063	Dr dawood bobat	2005-08-26T00:31:47	1	2005-09-03T00:46:49	1
	MP0190802	Dr Sayyed Loot	2005-08-18T16:24:00	1	2005-08-24T17:21:39	1
	MP0192767	Dr Abdul Samad So	2005-08-19T22:31:10	1	2005-08-27T23:24:44	1
	MP0200581	Dr ROY MARONEY	2005-08-24T19:55:09	1	2005-08-28T06:09:19	1
	MP0201030	Dr Gopaul Narains	2005-08-26T10:28:12	1	2005-08-30T10:49:01	1
	MP0204820	Dr Armando Ribei	2005-08-31T09:46:57	1	2005-09-15T12:34:24	1

Group	MSDID	Names	Entry date	entry	Exit date	exit
	MP0204951	Dr abdul kader ha	2005-09-09T12:57:26	1	2005-09-11T13:07:24	1
	MP0206040	Dr Miles Bartlett	2005-08-25T13:18:01	1	2005-08-16T13:05:23	1
	MP0234486	Dr CHERITH BIDEN	2005-08-24T21:13:39	1	2005-09-06T19:57:03	1
	MP0241326	Dr Anver Motala	2005-08-24T20:59:49	1	2005-08-28T22:21:12	1
	MP0244112	Dr louis Botha	2005-08-21T13:09:54	1	2005-09-15T12:59:27	1
	MP0264954	Dr Ameerudin Chic	2005-08-25T20:18:48	1	2005-08-27T20:31:38	1
	MP0271071	Dr Lukas Botha	2005-08-25T22:55:04	1	2005-08-30T17:47:19	1
	MP0273295	Dr Abdool Hamid H	2005-09-05T19:43:42	1	2005-09-10T22:10:07	1
	MP0283592	Dr Gary Goldmann	2005-08-26T13:48:57	1	2005-09-06T17:05:54	1
	MP0293865	Dr Elizabeth Joha	2005-08-30T09:38:41	1	2005-09-08T11:50:30	1
	MP0304867	Dr Gideon Malherb	2005-08-24T19:11:48	1	2005-08-24T20:15:50	1
	MP0309133	Dr Jacqueline Bro	2005-09-02T10:49:27	1	2005-09-09T08:38:38	1
	MP0336815	Dr DUNCAN LLOYD	2005-08-17T10:34:21	1	2005-08-25T16:01:08	1
	MP0347663	Dr Mergan Naidoo	2005-08-19T18:03:44	1	2005-08-24T18:57:11	1
	MP0349585	Dr Z M Shaik	2005-08-24T22:28:41	1	2005-09-05T23:15:49	1
	MP0377678	Dr jacek marszale	2005-08-25T10:26:49	1	2005-08-26T01:21:05	1
	MP0388394	Dr Derrick Attfie	2005-08-24T15:46:16	1	.	.
	MP0405078	Dr Linda Cline-Ba	2005-09-02T21:59:15	1	2005-09-03T21:25:34	1

Group	MSDID	Names	Entry date	entry	Exit date	exit
	MP0471690	Dr OZAYR HAROON M	2005-08-24T20:57:31	1	.	.
	MP1234567	Dr Negusie Alula	2005-08-25T09:19:56	1	2005-09-01T16:31:44	1
2 - E-module & call				36		34

SURVEYS

Group=3 - Control (Entry & Exit survey)

Group	MSDID	Names	Entry date	entry	Exit date	exit
3 - Control (Entry & Exit survey)	0200700MP	Melmed, R	2005-07-20T20:48:55	1	2005-09-15T21:45:17	1
	0231282MP	Dr MA Laher - For	2005-09-15T16:52:39	1	2005-09-15T16:54:52	1
	0234770MP	M Nicholas	2005-07-26T16:46:09	1	.	.
	0244112MP	L Botha	2005-07-13T18:49:32	1	2005-09-15T15:28:07	1
	0248746MP	Dr J Pridgeon - S	2005-07-13T15:15:12	1	2005-09-15T16:47:48	1
	0259519MP	Dr janse v Rensbu	2005-07-13T11:26:27	1	.	.
	0285161MP	Dr H Cobb - Roseb	2005-09-15T16:58:07	1	2005-09-15T17:00:04	1
	0341746MP	Robbertze, Gert	2005-07-13T11:42:38	1	.	.
	0482749MP	Dr. J Bruckner	2005-07-11T18:24:05	1	.	.
	MP0027266	Dr Nassim Kamdar	2005-08-25T12:03:30	1	2005-09-15T20:29:22	1
	MP0028287	Dr Pieta Serfonte	2005-08-25T05:55:24	1	2005-09-15T14:12:29	1
	MP0049115	Dr Gerald Budow	2005-08-24T19:30:01	1	2005-09-15T18:58:05	1
	MP0062049	Prof Patrick Fitz	2005-08-25T11:30:49	1	2005-09-17T05:52:39	1
	MP0083062	Dr Steven Meihuiz	2005-09-01T20:21:09	1	2005-09-18T21:17:30	1
	MP0088048	Dr Billy Levin	2005-08-25T23:31:28	1	2005-09-15T18:33:10	1
	MP0089036	Dr John Taylor	2005-08-28T13:22:20	1	2005-09-17T18:03:33	1

Group	MSDID	Names	Entry date	entry	Exit date	exit
	MP0103578	Dr Philip Garratt	2005-08-24T19:18:48	1	2005-09-16T06:43:38	1
	MP0138878	Dr Neethea Naidoo	2005-08-30T22:25:07	1	2005-09-15T22:47:37	1
	MP0146141	Dr Mohan Sewdarse	2005-08-30T20:18:33	1	2005-09-16T22:04:58	1
	MP0150371	Dr Sidney Mann	2005-08-24T15:52:32	1	2005-09-15T14:35:09	1
	MP0152161	Dr Deren Jagjivan	2005-08-28T12:47:15	1	2005-09-17T00:15:30	1
	MP0161012	Dr Jakkie Swanepo	2005-08-26T14:51:03	1	2005-09-16T16:11:03	1
	MP0174149	Dr Bharuth Seetha	2005-08-24T18:41:06	1	.	.
	MP0183482	Dr indra ranchod	2005-08-25T10:50:45	1	.	.
	MP0187330	Dr kantilal valla	2005-08-30T22:48:26	1	2005-09-16T22:08:07	1
	MP0195405	Dr Rashid Essat	2005-08-25T21:04:40	1	2005-09-12T20:55:32	1
	MP0202266	Dr Abdulhak Shaik	2005-09-06T22:34:59	1	2005-09-16T20:16:30	1
	MP0212547	Dr Jalaluddin Son	2005-09-01T16:16:10	1	.	.
	MP0212857	Dr Thiart Willem	2005-08-27T08:03:05	1	2005-09-15T14:02:10	1
	MP0218588	Dr Mohamed Ebrahi	2005-08-30T21:41:28	1	2005-09-18T21:49:31	1
	MP0233226	Dr Kinnie Steyn	2005-07-14T15:50:53	1	2005-09-19T08:54:50	1
	MP0247782	Dr Allan Milne	2005-08-24T17:39:58	1	2005-09-16T07:34:34	1
	MP0279374	Dr Ebrahim Ismail	2005-08-24T15:35:04	1	2005-09-16T10:19:50	1
	MP0285986	Dr Jan Olivier	2005-08-30T14:18:47	1	.	.

Group	MSDID	Names	Entry date	entry	Exit date	exit
	MP0290394	Dr Annamarie Rich	2005-08-31T10:51:39	1	2005-09-16T11:15:02	1
	MP0296333	Dr Vusumuzi Memel	2005-08-26T08:58:11	1	2005-09-15T13:37:38	1
	MP0298611	Dr Padaruth Ramla	2005-08-25T00:22:58	1	2005-09-16T03:07:24	1
	MP0300403	Dr C. Bester	2005-07-13T10:46:36	1	2005-09-15T13:33:18	1
	MP0304395	Dr Louise Lindenb	2005-08-25T08:14:05	1	2005-08-30T19:46:25	1
	MP0304590	Dr Sheraaz Gani	2005-09-01T20:58:52	1	.	.
	MP0305278	Dr Johan Greyling	2005-08-31T08:59:54	1	.	.
	MP0306061	Dr Daniël van Str	2005-08-30T20:52:42	1	2005-09-16T23:23:17	1
	MP0319562	Dr ania kritzinge	2005-08-26T10:27:28	1	.	.
	MP0332488	Dr A Amod	2005-07-21T19:50:13	1	2005-09-16T10:45:15	1
	MP0341746	Dr Gert Robbertze	2005-08-30T15:55:22	1	.	.
	MP0346271	Dr EBRAHIM HAFFEJ	2005-08-24T16:30:01	1	2005-09-15T22:20:13	1
	MP0362719	Dr mark bagwandee	2005-08-25T13:28:33	1	2005-09-14T11:47:45	1
	MP0365734	Dr Wynand Goosen	2005-08-24T22:40:01	1	.	.
	MP0371394	Dr Robert Harriso	2005-08-25T11:17:56	1	2005-09-16T15:28:57	1
	MP0389145	Dr Tinus Laubsche	2005-08-30T15:51:19	1	2005-09-15T14:01:29	1
	MP0393886	Dr Christiaan Jac	2005-08-26T11:46:38	1	2005-09-15T17:12:40	1
	MP0394432	Dr Surendra Sirka	2005-08-24T20:26:30	1	2005-09-15T20:11:28	1

Group	MSDID	Names	Entry date	entry	Exit date	exit
	MP0399906	Dr Alexandar Niko	2005-09-01T16:05:19	1	2005-09-16T06:03:41	1
	MP0402575	Dr joseph mashilo	2005-08-24T21:45:37	1	2005-09-15T23:25:18	1
	MP0409693	Dr Jacques Daffue	2005-08-31T11:17:36	1	2005-09-16T10:14:58	1
	MP0417823	Dr Riaz Ismail	2005-09-05T21:33:01	1	2005-09-17T16:06:39	1
	MP0419788	Dr Joshua Mugerwa	2005-08-25T00:28:29	1	2005-09-15T23:41:17	1
	MP0425427	Dr Giyas Shaikh	2005-08-31T15:58:59	1	.	.
	MP0442259	Dr Craig Roberts	2005-08-25T08:36:24	1	2005-09-16T08:31:45	1
	MP0450294	Dr Ralph Tracey	2005-08-29T20:12:05	1	2005-09-19T07:03:51	1
	MP0452211	Dr Indres Lingoom	2005-08-25T13:41:41	1	2005-09-15T15:30:05	1
	MP0489158	Dr. F. de Beer	2005-07-26T23:05:26	1	.	.
	MP0545694	Nico Nel	2005-07-16T09:26:48	1	.	.
3 - Control (Entry & Exit survey)				63		47

ADDENDUM D: STATISTICAL CALCULATIONS

Chi-square test

Chi-square goodness-of-fit test for one-way frequency tables. Let *C* denote the number of classes, or levels, in the one-way table. Let f_i denote the frequency of class *i* (or the number of observations in class *i*) for $i=1,2,...,C$. Then the chi-square statistic is computed as

$$\chi^2 = \sum \frac{(f_o - f_e)^2}{f_e}$$

where f_e is the expected frequency for class *i* under the null hypothesis. In the test for equal proportions, the null hypothesis specifies equal proportions of the total sample size for each class. Under this null hypothesis, the expected frequency for each class equals the total sample size divided by the number of classes.

McNemar's test

McNemar's test is appropriate when you are analyzing data from matched pairs of subjects with a dichotomous (yes-no) response. It tests the null hypothesis of marginal homogeneity (*p1.=p.1)*. McNemar's test is computed as

$$Q_M = \frac{(n_{12} - n_{21})^2}{n_{12} + n_{21}}$$

Kappa test

The simple kappa coefficient is a measure of agreement appropriate when you are analyzing data from matched pairs of subjects with a polytomous response:

$$\hat{\kappa} = \frac{P_0 - P_e}{1 - P_e}$$

where $P_0=\Sigma_i p_{ii}$ and $P_e=\Sigma_i p_{i\cdot} p_{\cdot i}$.

Cochran-Mantel-Haenszel's test for linear association

CMH statistics use a more complicated formulation, since they assess differences between sets of tables.

Cochran-Mantel-Haenszel statistics are more easily defined in terms of matrices. The following notation is used. Vectors are presumed to be column vectors unless they are transposed (').

$$\begin{aligned}
\mathbf{n}_{hi}' &= (n_{hi1}, n_{hi2}, \ldots, n_{hiC}) && (1 \times C)\\
\mathbf{n}_{h}' &= (\mathbf{n}_{h1}', \mathbf{n}_{h2}', \ldots, \mathbf{n}_{hR}') && (1 \times RC)\\
p_{hi\cdot} &= [(n_{hi\cdot})/(n_h)] && (1 \times 1)\\
p_{h\cdot j} &= [(n_{h\cdot j})/(n_h)] && (1 \times 1)\\
\mathbf{P}_{h\cdot}' &= (p_{h1\cdot}, p_{h2\cdot}, \ldots, p_{hR\cdot}) && (1 \times R)\\
\mathbf{P}_{h\cdot}' &= (p_{h\cdot 1}, p_{h\cdot 2}, \ldots, p_{h\cdot C}) && (1 \times C)
\end{aligned}$$

Assume that the strata are independent and that the marginal totals of each stratum are fixed. The null hypothesis, H_0, is that there is no association between X and Y in any of the strata. The corresponding model is the multiple hypergeometric; this implies that, under H_0, the expected value and covariance matrix of the frequencies are, respectively,

$$\mathbf{m}_h = \mathbf{E}[\mathbf{n}_h \mid H_0] = n_h(\mathbf{P}_{h\cdot\cdot} \otimes \mathbf{P}_{h\cdot\cdot})$$

and

$$\mathbf{var}[\mathbf{n}_h \mid H_0] = c\left((\mathbf{D}_{\mathbf{P}h\cdot\cdot} - \mathbf{P}_{h\cdot\cdot}\mathbf{P}_{h\cdot\cdot}')\otimes(\mathbf{D}_{\mathbf{P}h\cdot\cdot} - \mathbf{P}_{h\cdot\cdot}\mathbf{P}_{h\cdot\cdot}')\right)$$

where

$c = [(n_h^2)/(n_h-1)]$

and where $\otimes$ denotes Kronecker product multiplication and $\mathbf{D_a}$ is a diagonal matrix with elements of **a** on the main diagonal.

The generalized CMH statistic is defined as

$$Q_{CMH} = \mathbf{G}'\mathbf{V}_{\mathbf{G}}^{-1}\mathbf{G}$$

$$\mathbf{G} = \sum_h \mathbf{B}_h(\mathbf{n}_h - \mathbf{m}_h)$$

$$\mathbf{V}_{\mathbf{G}} = \sum_h \mathbf{B}_h\left(\mathbf{Var}(\mathbf{n}_h \mid H_0)\right)\mathbf{B}_h'$$

and where

$$\mathbf{B}_h = \mathbf{C}_h \otimes \mathbf{R}_h$$

is a matrix of fixed constants based on column scores $\mathbf{C}_h$ and row scores $\mathbf{R}_h$. When the null hypothesis is true, the CMH statistic has an asymptotic chi-square distribution with degrees of freedom equal to the rank of $\mathbf{B}_h$.

Sources:

1. Sanchez, J. Softmed Spain
2. Friendly, M. (2003). SCS Short Course, May 16, p1-104
3. SAS Institute Inc. Cary, NC, USA

ADDENDUM E

THE COZAAR e-PILOT

PRESENTATION

21 October 2005

Location:

Admin Boardroom MSD, Midrand, Gauteng, South Africa

Attended by:

Paul Edwards – Marketing Director

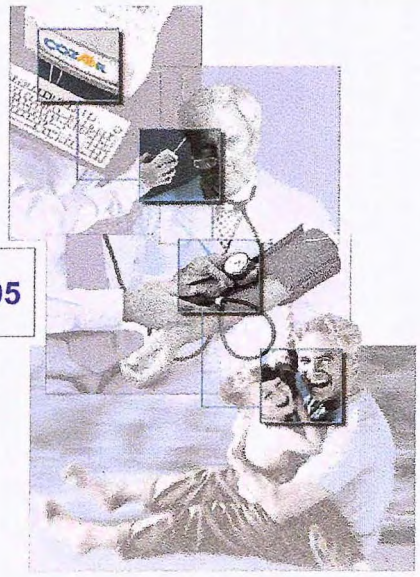
Kgabagare Photoane – e-Marketing Manager

Helen Talbot – Marketing Manager Cardiovascular Division

Andrew Nicholson – Marketing Manager Hospital & Speciality Division

NB.

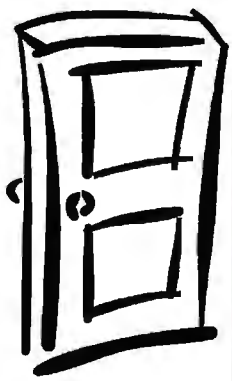
The same presentation is scheduled to be delivered to Chirfi Guindo (MSD, CEO, South Africa) on the 8 November 2005.



The COZAAR e - Pilot 2005

An analysis of the effectiveness of e-Profiling and e-Detailing

A situational Analysis



The pharmaceutical industry has become very crowded and competitive

- There are > 2000 reps and regional sales managers (40% increase 2004/2000)
- These reps essentially compete for the attention of 16676 family physicians and specialist physicians (15% increase 2004/2000)
- 12770 of whom are in metropolitan areas and 4500 of whom are considered top-tier prescribers
- "cutthroat product rivalry" amongst leading companies all competing for time in front of the same target physicians

(Source: IMS, NDTI Audit, Dec 2004; Medikredit – July, 2004; IMS MPI - Q2, 2005)

Reps no longer wield the same promotional power as they used to

- Only 55% of reps get to see the physician they are targeting (vs. 75% in 2001)
- The average duration of each call is 7 minutes (vs. 9 minutes in 2001)
- Only 29% of these calls are considered by the physician to be "very useful" (vs. 35% in 2001)
- Sales reps average 6 quality detail calls per day (vs. 8 quality calls in 2000) and discuss on average 2.5 products per call (vs. 3 products in 2000)

(Source: GP Promotion Monitor – June, 2004; IMS MPI - Q2, 2005)

Limited time in front of the physician has become a significant limiting factor for CRM and Promotion

- Less time to develop relationships with customers
- Less time to focus on the physician's needs
- Less time to deliver complete promotional messages
- Less time to differentiate products from the competition
- Decline in the reach and frequency of promotional messaging

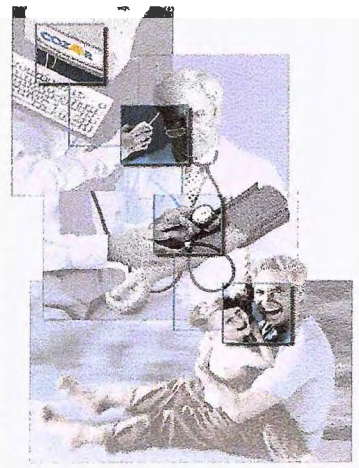
LIFE & RENAAL ?

Problem Statement/s

- "If time in front of the physician is becoming more and more difficult for the salesperson to achieve, would e-Profiling and e-Detailing not offer opportunities?
- Would a strategy that integrates e-Profiling and e-Detailing into the sales and marketing process, not offer multi-channel synergies that could provide MSD with a competitive advantage over its competitors?"

(Burgess, 2005)

About e-Profiling and e-Detailing



The context in which e-Profiling evolved

Traditional Profiling:

- **Sales reps would capture information about a customer's practice type, practice size, patient demographics, pharmaceutical brand preferences / loyalties and areas of academic interest**

- **This information would be collectively used to better understand target customer segments and develop strategies to rapidly build brand equity within these segments.**

The context in which e-Profiling has evolved

Any e-Marketing initiative which incorporates a facility for user identification can also be geared for e- Profiling.

- Using e-questionnaires, self-qualifying surveys and incentives we can now access and gather this kind of critical information directly from physicians whilst they are online.
- Web-analytics may also deliver key metrics on web activity that will allow pharmaceutical marketers the opportunity to better understand their physician's needs, beliefs and behaviour
- Using the above methodology the opportunity exists to test customer's reactions to strategy and promotional material

The context in which e-Detailing has evolved

Traditional detailing:

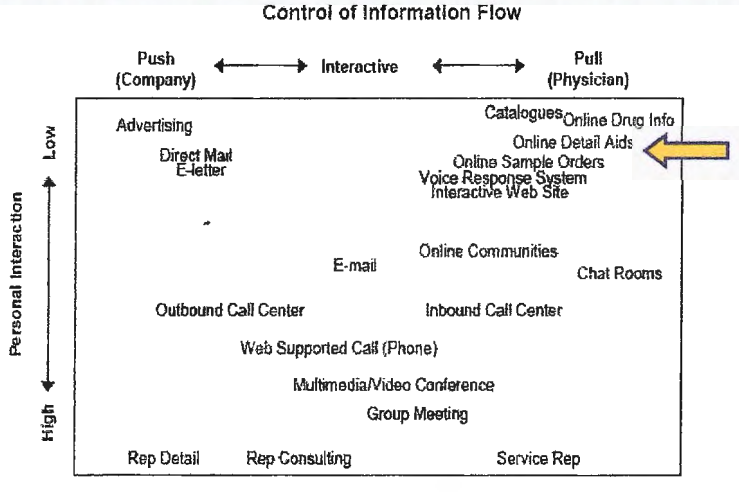
- A "push" model, with the sales rep driving the process, directly pushing the "features and benefits" of their products on the physician.
- Involves face-to-face discussions with the physician about a product's pharmacokinetic profile, efficacy, safety, dosing and "evidence based medicine".
- Is highly effective but not as efficient
- Subject to "Time and Place" restrictions

The context in which e-Detailing evolved

e-Detailing:

- ❑ **Is a 'pull" model, where the physician is motivated to act independently and to participate online in the information transaction with no time and place restrictions.**
- ❑ **Is the digital equivalent of the sales rep detail, using internet enabled technology in the sales detailing process to supplement and reinforce other offline promotional and sales efforts.**
- ❑ **Solutions vary in terms of their interactivity, from static product information online, to those that involve physicians in 2-way virtual details (self-guided).**

The context in which e-Detailing evolved



(Source: Bernewitz, ZS Associates, 2001)

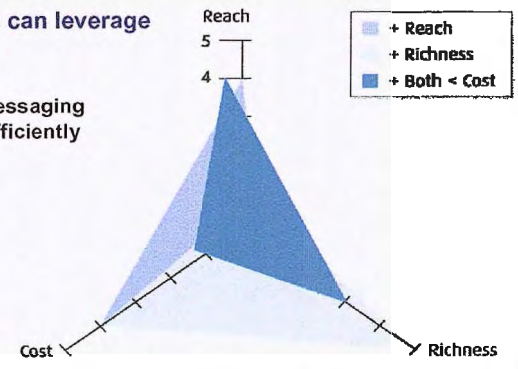
Multi-channel synergies overcome the barriers to traditional detailing and compliment the sales force.

In the past, less costly marketing initiatives often lacked:

- ❑ "rich and interactive" promotional value
- ❑ and the power to reach a large number of physicians quickly.

Now, with the advent of internet we can leverage multi-channel synergies to:

- ❑ deliver very "rich and interactive" messaging
- ❑ reach large numbers of physicians efficiently
- ❑ and at relatively lower cost



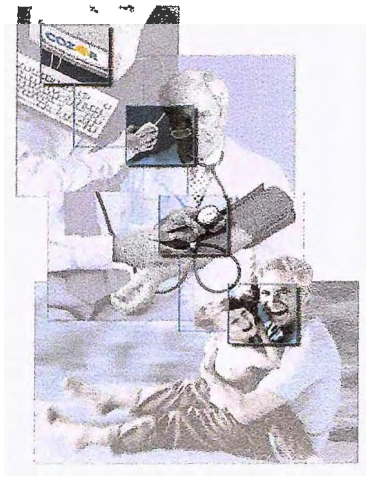
Advantages of e-Profiling & e-Detailing

If executed properly e-Detailing is expected to…

- ❑ Provide useful physician- level data feedback for improve CRM
- ❑ Increase the reach and frequency of the promotional message
- ❑ Expose physicians to higher quality & more interactive promotion
- ❑ Provide higher customer acceptance and openness towards the content
- ❑ Significantly influence perceptions and drive desired behaviour
- ❑ Provide synergistic effects for conventional detailing
- ❑ Provide paperless cost-efficient marketing campaigns

The COZAAR e-Pilot : 2005

losartan



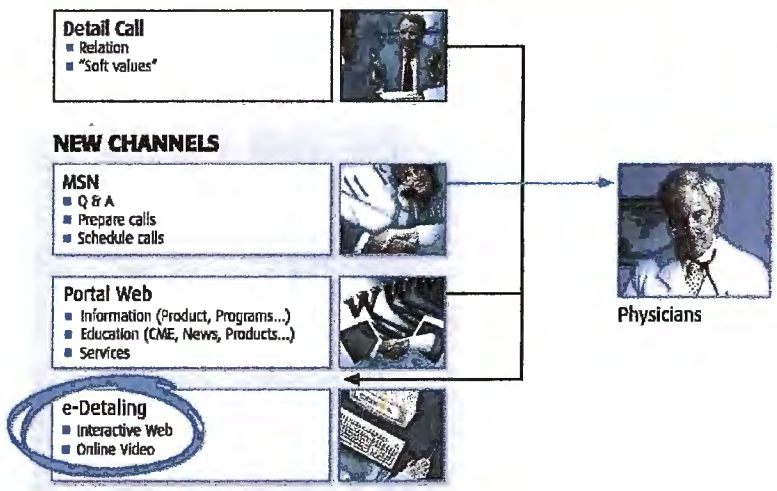
The COZAAR e-Pilot : 2005

The COZAAR e-Pilot was therefore developed to…

- **Quantitatively and qualitatively analyse the effectiveness of e-profiling and e-Detailing as marketing tools for shaping customer perceptions and behaviour.**

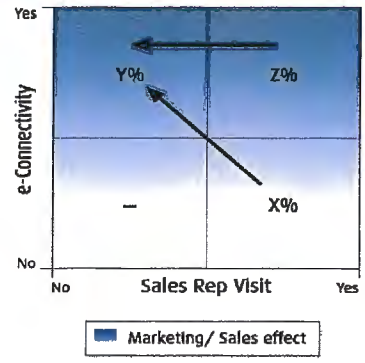
- **Determine whether or not MSD should pursue e-Profiling and e-Detailing strategies in the near future – alone, or in combination with traditional rep activities**

A multi-channel synergistic approach may overcome the barriers to traditional detailing and compliment the sales force.



The e-Profiling / e-Detailing Strategy Hypothesis

Branded online e-Profiling and e-Detailing activities correlate to:



- ❑ More accurate targeting strategies
- ❑ Increased reach and frequency of the promotional message – DTS physicians
- ❑ Changes in attitudes and beliefs on pharmacotherapy and brand choice
- ❑ Prescribing of MSD brands (behavioural) and sustained efficiencies in conventional product detailing by the sales force

The COZAAR e-Pilot Broad Objectives

The COZAAR e-Pilot was developed to quantitatively and qualitatively determine the following:

- Whether or not SA physicians are ready for e-Marketing
- Whether e-Profiling has the potential to improve our understanding of our customers
- Whether e-Detailing has the power to sensitize physicians, shape their perceptions and drive desired prescribing behavior.
- Whether e-Profiling and e-Detailing should be integrated with field force activities in the near future
- Whilst at the same time, gaining some valuable market research
- Whilst at the same time, increasing the reach and frequency of the COZAAR promotional message on participating physicians

The COZAAR e-Pilot Methodology

- 450 High potential – low prescribing physicians were invited by e-mail (with individual URL) to take part in the COZAAR e-Pilot
- 175 difficult-to-see physicians were targeted for group 1, and would receive only e-Detailing modules over a 4 week period
- Another 175 easy-to-see physicians were targeted for group 2, and would receive e-Detailing modules and a rep visit over the same 4 week period
- Finally 100 physicians were targeted for the control group 3, and would receive a rep visits but no e-Detailing modules over the 4 week period
- All 450 physicians were asked to complete online entry and exit surveys, so that changes in perceptions and behaviours could be tracked

The COZAAR e-Pilot Methodology

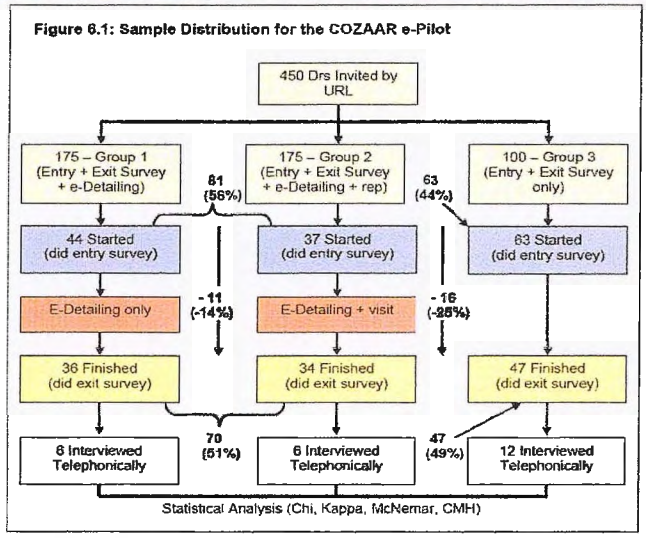
- E-mails to promote and give access (by individual URL) to the e-Detailing modules, which were posted on the Softmed medical web-site (independent site), were then sent out on 26 August 2005.
- On enrolment all physicians were asked to complete an entry survey.
- Only test groups 1&2, were then given access to use the e-Detailing modules. Physicians were prompted to complete one e-Module per week for 4 weeks (e-Workshop comprised of 4 x e-Detailing modules). The following modules were made available in accordance with the current COZAAR marketing strategy:

(1) Stroke the most feared consequence of hypertension
(2) The role of LVH
(3) Reduction of CV morbidity and mortality
(4) Benefits beyond BP – and the Treatment Guidelines

The COZAAR e-Pilot Methodology

- Key product messages and the corresponding clinical evidences to support them were integrated into the e-Modules (e-Details).
- All physicians, including the control group, were then re-invited / prompted to complete the exit survey at the end of the 4 week period – 15 October 2005
- Surveys were then statistically analysed using SAS programming (SAS® 9.1) to determine how effective e-Detailing, alone, or in combination with rep activity was compared to the control.
- A telephonic survey conducted amongst 24 physicians was also carried out to determine what improvements could be made and problems avoided in future.

The COZAAR e-Pilot Sample Distribution



(Source: Brian Burgess, 2005)

e-Profiling Research Questions & Results

Did the e-Pilot allow us to profile physicians in terms of their interest in internet-based learning and their use of the internet?

- **Response rate - 450 physicians invited, 144 responded, which equates to a 32% response rate.**
- **This was better than in Spain where they achieved a 24% responder rate.**
- **Internet Usage - 98% of them confirmed that they routinely use the internet**
- **Internet Usage - 93% confirmed that they would use it to conduct medical research.**

e-Profiling Research Questions & Results

Did the e-Pilot allow us to profile physicians in terms of their ability to use internet enabled technologies?

- **81 doctors started e-Detailing and 70 finished = 86% persistence rate.**
- **Mean duration = 2.5 hours. Minimum duration = 88 minutes, mean 161 minutes and maximum 301 minutes, with a SD of 50.96.**

Table 6.1: Time to complete e-Pilot – Distribution

	e-Detailing	
	N	%
Less than 90 mins	2	2.85
90-120 mins	10	14.28
120-150 mins	22	27.14
150-180 mins	16	18.57
180-210 mins	7	18.57
210-240 mins	5	10
240-270 mins	4	2.85
More than 240 mins	4	1.42
Total	70	100

(Source: COZAAR e-Pilot, SAS Output, October 2005)

e-Profiling Research Questions & Results

Did the e-Pilot allow us to profile physicians in terms of their ability to use internet enabled technologies?

- **81 physicians started e-Detailing and 76 of them used the available useful resources.**
- **Most used between 5 and 10 useful resources throughout the pilot with a minimum of 1, maximum of 12, a mean of 6.14 and a SD of 3.34.**

Table 6.2: Use of Interesting Resources – Distribution

	e-Detailing	
	N	%
Less than 5 useful links + downloads used	25	32.89
5-10	34	44.73
10-15	12	15.78
Total	76	100

(Source: COZAAR e-Pilot, SAS Output, October 2005)

e-Profiling Research Questions & Results

Did the e-Pilot allow us to profile our customers in terms of their patient base?

- **Most of the physicians involved in the pilot see up to 30 hypertensive patients in a week.**

Table 6.3: Size of Hypertensive Practice – Distribution

	Overall		e-workshop		Control	
	N	%	N	%	N	%
Less than 10 patients	35	25.00	24	31.17	11	17.46
10-19 patients	46	32.86	24	31.17	22	34.92
20-29 patients	30	21.43	15	19.48	15	23.81
30-39 patients	8	5.71	2	2.6	6	9.52
40-49 patients	6	4.29	2	2.6	4	6.35
50-59 patients	8	5.71	6	7.79	2	3.17
60-69 patients	2	1.43	1	1.3	1	1.59
More than 100 patients	5	3.57	3	3.9	2	3.17
Total	140	100.00	77	100	63	100

(Source: COZAAR e-Pilot, SAS Output, October 2005)

e-Profiling Research Questions & Results

Did the e-Pilot allow us to profile our customers in terms of their most current scripting habits?

- **Diuretics and ACEIs are the most commonly used anti-hypertensive therapies amongst the physicians that participated.**
- **AIIAs are used in 21.35% and most often use combination therapies to treat hypertension (sum of Mean Values > 100%)**

Table 6.4: Hypertension Scripting - Distribution

Percentage of hypertensive patients currently using:	MEAN	STD	MIN	MAX
Diurectics	47.71	30.56	0.00	99.00
Beta-Blockers	25.66	21.21	0.00	90.00
Calcium Channel Blockers	21.35	15.87	0.00	80.00
ACE Inhibitors	41.96	22.37	0.00	90.00
Angiotensin Receptor Blockers	21.35	15.87	0.00	80.00

(Source: COZAAR e-Pilot, SAS Output, October 2005)

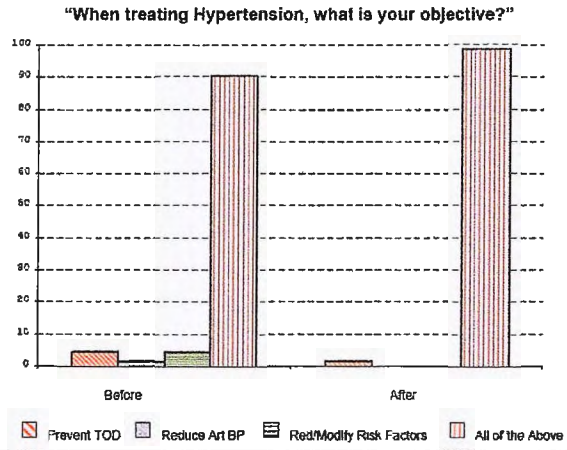
e-Detailing Research Questions & Results

❑ Did e-Detailing have the power to significantly influence the physician's perceptions and drive desired behaviour?

Did e-Detailing significantly influence the physician's perceptions in regard to the objective of treating hypertension?

Figure 6.2a: e-Detailed Groups (1&2)

NO significant Change

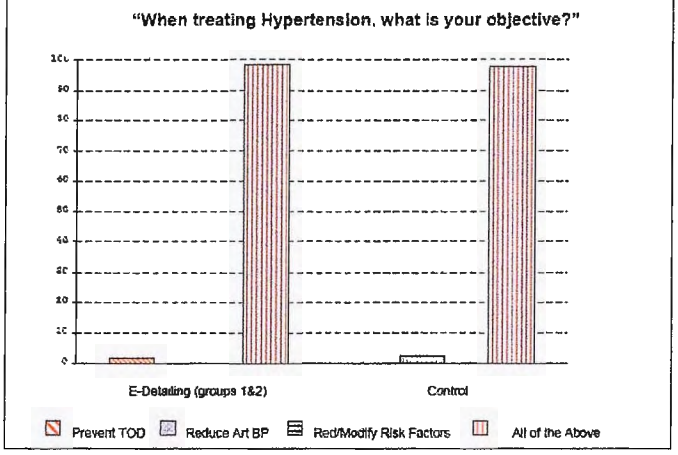


(Source: COZAAR e-Pilot, SAS Output, October 2005)

Did e-Detailing significantly influence the physician's perceptions in regard to the objective of treating hypertension?

Figure 6.2b: After Exit Survey

NO significant Change

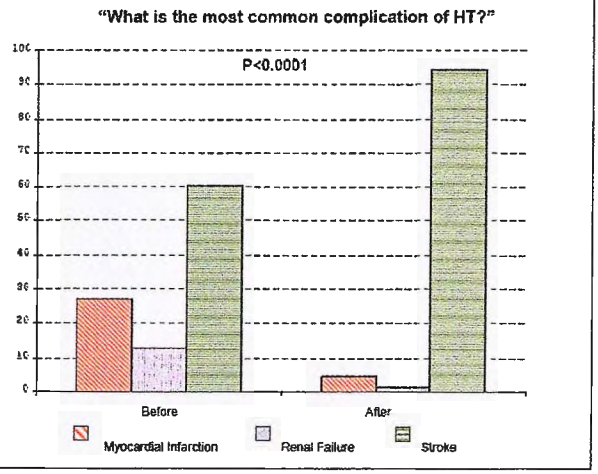


(Source: COZAAR e-Pilot, SAS Output, October 2005)

Did e-Detailing significantly increase the physician's perceptions that Stroke is the most Complication of Hypertension?

Figure 6.3a: E-Detailed Groups (1&2)

Significant Change

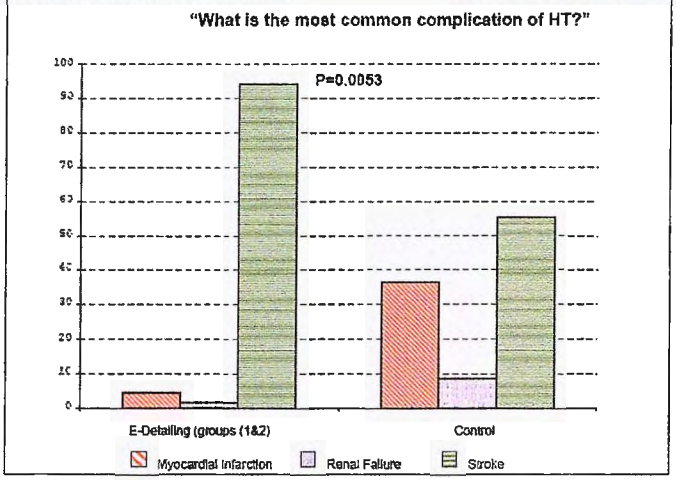


(Source: COZAAR e-Pilot, SAS Output, October 2005)

Did e-Detailing significantly increase the physician's perceptions that Stroke is the most Complication of Hypertension?

Figure 6.3b: After COZAAR e-Pilot

Significant Change



(Source: COZAAR e-Pilot, SAS Output, October 2005)

Did e-Detailing significantly increase the physician's perceptions that Stroke is the most Complication of Hypertension?

- **E-Detailing only (group 1) vs. Control (group 3):** There were a significantly higher number of physicians who adopted the MSD view in the group that received e-Detailing only (group 1) vs. the control (group 3). This difference was determined to be statistically significant (CMH; p=0.0115)

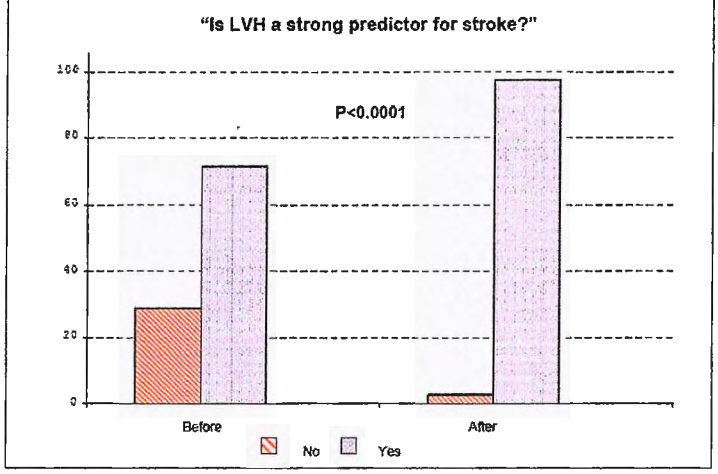
- **E-Detailing + Rep visit (group 2) vs. Control (group 3):** There were a significantly higher number of physicians who adopted the MSD view in the group that received e-Detailing + rep visit (group 2) vs. the control (group 3). This difference was determined to be statistically significant (CMH; p=0.0029)

- **E-Detailing only (group 1) vs. e-Detailing + rep visit (group 2):** Here there was no statistically significant differences (CMH; p=0.1699)

Did e- Detailing have the power to significantly increase the physician's perception that LVH is a strong predictor for stroke?

Significant Change

Figure 6.4a: E-Detailed Groups (1&2)

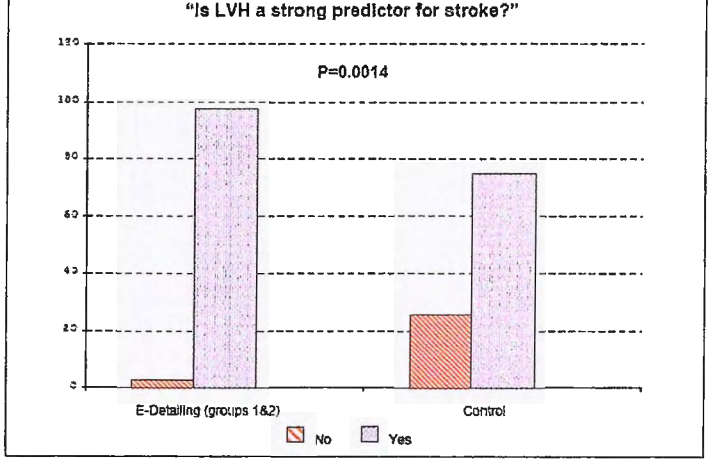


(Source: COZAAR e-Pilot, SAS Output, October 2005)

Did e- Detailing have the power to significantly increase the physician's perception that LVH is a strong predictor for stroke?

Significant Change

Figure 6.4b: After COZAAR e-Pilot



(Source: COZAAR e-Pilot, SAS Output, October 2005)

Did e- Detailing have the power to significantly increase the physician's perception that LVH is a strong predictor for stroke?

- **E-Detailing only (group 1) vs. Control (group 3):** There were a significantly higher number of physicians who adopted the MSD view in the group that received e-Detailing only (group 1) vs. the control (group 3). This difference was determined to be statistically significant (CMH; p=0.0039)

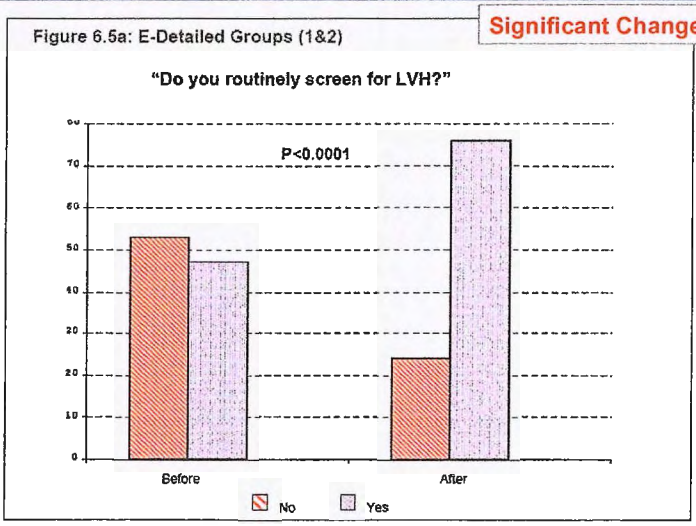
- **E-Detailing + Rep visit (group 2) vs. Control (group 3):** There were a significantly higher number of physicians who adopted the opinion that LVH is a strong predictor for stroke in the group that received e-Detailing + rep visit (group 2) vs. the control (group 3). This difference was determined to be statistically significant (CMH; p=0.0049)

- **E-Detailing only (group 1) vs. e-Detailing + rep visit (group 2):** There was also a higher number of physicians who adopted the opinion that LVH is a strong predictor for stroke in the group that received e-Detailing + rep visit (group 2) vs. the e-Detailing only (group 1). The difference was determined to be statistically significant (CMH; p=0.0252) i.e. the hybrid model was more effective than e-Detailing alone.

Did e-Detailing have the power to significantly influence more physicians to screen for LVH using ECG criteria?

Figure 6.5a: E-Detailed Groups (1&2)

Significant Change

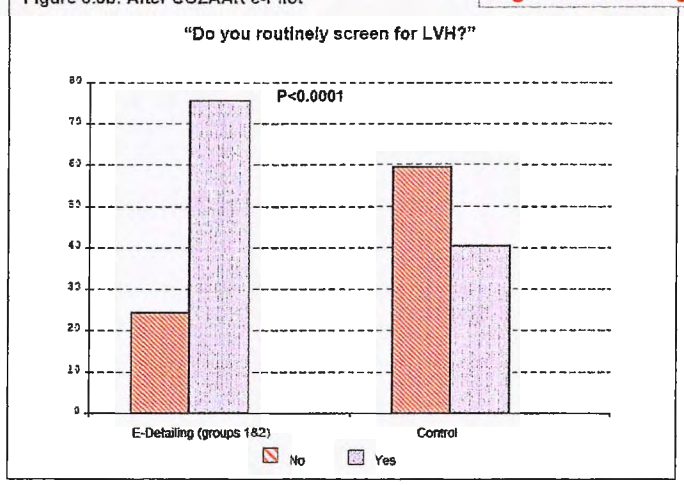


(Source: COZAAR e-Pilot, SAS Output, October 2005)

Did e-Detailing have the power to significantly influence more physicians to screen for LVH using ECG criteria?

Figure 6.5b: After COZAAR e-Pilot

Significant Change



(Source: COZAAR e-Pilot, SAS Output, October 2005)

Did e-Detailing have the power to significantly influence more physicians to screen for LVH using ECG criteria?

- **E-Detailing only (group 1) vs. Control (group 3):** There were significantly higher number of physicians who have started screening for LVH in the group that received e-Detailing only (group 1) vs. the control (group 3). This change trend was determined to be statistically significant (CMH; p<.0001)

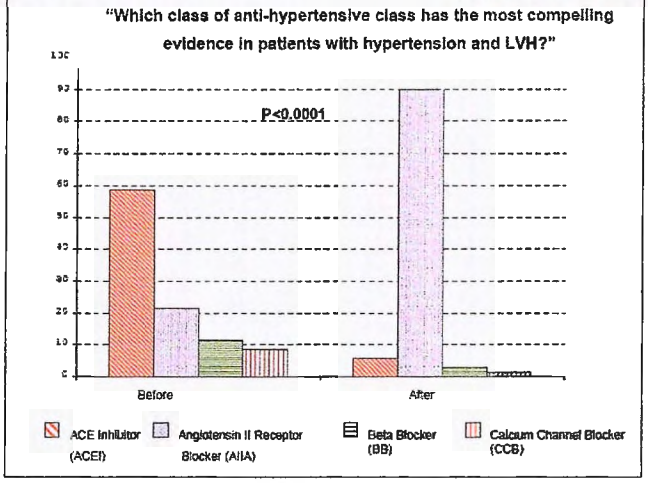
- **E-Detailing + Rep visit (group 2) vs. Control (group 3):** There were a significantly higher number of physicians who have started screening for LVH in the group that received e-Detailing + rep visit (group 2) vs. the control (group 3). This difference was determined to be statistically significant (CMH; p<.0001)

- **E-Detailing only (group 1) vs. e-Detailing + rep visit (group 2):** There was also a higher number of physicians who have started screening for LVH in the group that received e-Detailing + rep visit (group 2) vs. the group that received e-Detailing only (group 1). This difference was determined to be statistically significant (CMH; p=0.0001). i.e. the hybrid model was more effective than e-Detailing alone.

Did e-Detailing significantly increase the physician's perception that the AIIA class have the most compelling evidence in hypertensive patients with LVH?

Figure 6.6a: E-Detailed Groups (1&2)

Significant Change

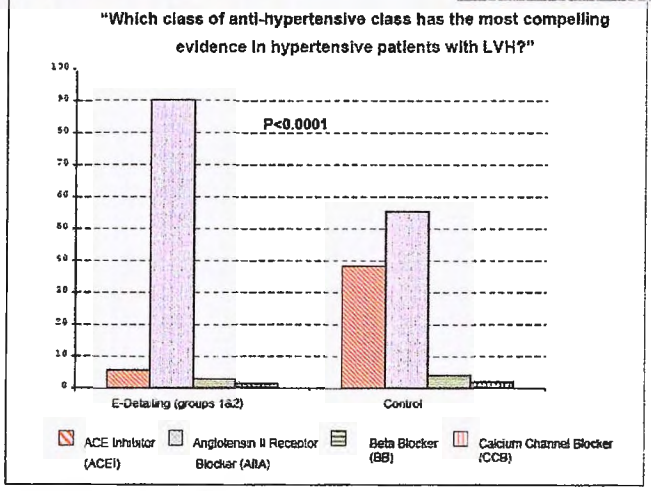


(Source: COZAAR e-Pilot, SAS Output, October 2005)

Did e-Detailing significantly increase the physician's perception that the AIIA class have the most compelling evidence in hypertensive patients with LVH?

Figure 6.6b: After COZAAR e-Pilot

Significant Change



(Source: COZAAR e-Pilot, SAS Output, October 2005)

Did e-Detailing significantly increase the physician's perception that the AIIA class have the most compelling evidence in hypertensive patients with LVH?

- **E-Detailing only (group 1) vs. Control (group 3):** There were significantly higher number of physicians who adopted the MSD view that AIIAs have the most compelling evidence, in the group that received e-Detailing only (group 1) vs. the control (group 3). This change trend was determined to be statistically significant (CMH; p<.0001)

- **E-Detailing + Rep visit (group 2) vs. Control (group 3):** There were a significantly higher number of physicians who had adopted the MSD view in the group that received e-Detailing + rep visit (group 2) vs. the control (group 3). This change trend was determined to be statistically significant (CMH; p<.0001)

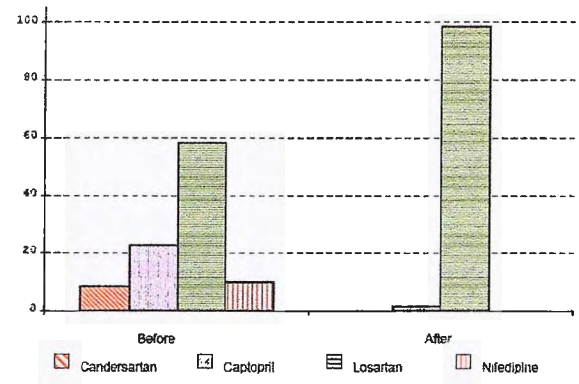
- **E-Detailing only (group 1) vs. e-Detailing + rep visit (group 2):** There was also a higher number of physicians who had adopted the MSD view in the group that received e-Detailing + rep visit (group 2) vs. the group that received e-Detailing only (group 1). This difference was determined to be statistically significant (CMH; p=0.0001) i.e. the hybrid model was more effective than e-Detailing alone.

Did e-Detailing significantly increase the physician's perception that Losartan has molecular specific advantages in the prevention of stroke?

Change so large - Kappa could not be calculated

Figure 6.7a: E-Detailed Groups (1&2)

"Which agent has molecular specific advantages over traditional anti-hypertensive therapies in the prevention of stroke?"

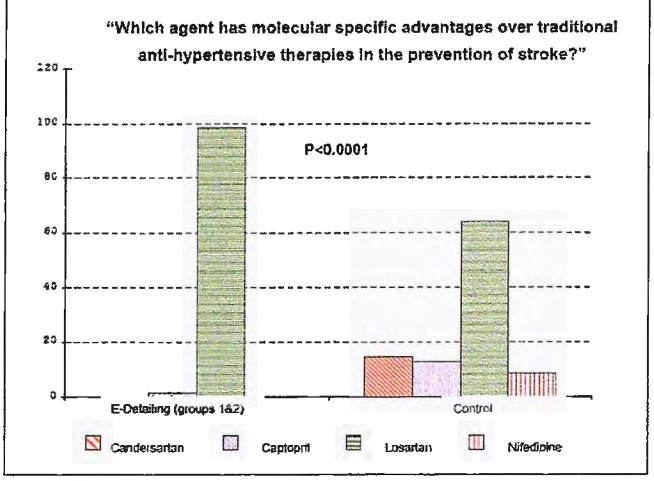


(Source: COZAAR e-Pilot, SAS Output, October 2005)

Did e-Detailing significantly increase the physician's perception that Losartan has molecular specific advantages in the prevention of stroke?

Significant Change

Figure 6.7b: After COZAAR e-Pilot



(Source: COZAAR e-Pilot, SAS Output, October 2005)

Did e-Detailing significantly increase the physician's perception that Losartan has molecular specific advantages in the prevention of stroke?

- **E-Detailing only (group 1) vs. Control (group 3):** There were significantly higher number of physicians who adopted the MSD view that Losartan (COZAAR) has molecular specific advantages in the prevention of stroke in the groups that received e-Detailing only (group 1) vs. the control (group 3). This change trend was determined to be statistically significant (CMH; p<.0001)

- **E-Detailing + Rep visit (group 2) vs. Control (group 3):** There were a significantly higher number of physicians who had adopted the MSD opinion that Losartan (COZAAR) has molecular specific advantages over traditional therapies in the prevention of stroke, in the group that received e-Detailing + rep visit (group 2) vs. the control (group 3). This change trend was determined to be statistically significant (CMH; p<.0001)

- **E-Detailing only (group 1) vs. e-Detailing + rep visit (group 2):** Here there was no statistically significant differences (CMH; p=0 .8520)

Summary of e-Profiling Results

- A significant number of physicians have the interest, ability and are equipped for e-Marketing.
- Most of these physicians see up to 30 hypertensive patients per week and treat mostly with ACE inhibitors and Diuretics; and in 21% of cases will use an AIIA.
- Most of these physicians will screen for LVH and understand that it is an important predictor for stroke.
- In line with the SA Hypertension guidelines, most physicians now believe that the AIIA class and moreover COZAAR has the overwhelming evidence for use in patients with hypertension and LVH to reduce the incidence of strokes
- 81% of the "difficult-to-see" physicians who received e-detailing only, are now willing to be visited by an MSD representative – for further information on advances in the management of Hypertension and Stroke Prevention.

Summary of e-Detailing Results

- Using various statistical tests, we were able to qualitatively and quantitatively determine in 5 out of 6 research questions, that e-Detailing alone, or in combination with rep activity, had the power to significantly influence the physician's perceptions and drive desired behaviour
- If one compares the impact e-Detailing had in groups 1&2 versus the impact of reps alone in the control group, one is able to deduce that e-Detailing may be more effective than sales reps – with the difficult-to-see physicians.
- However, change trends were most significant in group 2 (e-Detailing + rep visit). This finding suggests that a hybrid "push-pull" detailing model that integrates both electronic and traditional methods is most effective. This finding also supports international research and opinion.

Summary of e-Detailing Results

- E-Detailing effectively enabled MSD to deliver four details (four modules) over the period of just four weeks.
- Using traditional methods this would have been impossible to achieve.
- The increased quality, reach and frequency of the promotional messages in this case, related to a significant impact on the physician's perceptions and behaviour.
- E-Detailing has, therefore, proven to be a highly effective marketing tool, one which should not be ignored by MSD.

Summary of Telephone Survey

The 3 most common complaints in regard to the COZAAR e-Pilot were:

- The modules were too long
- Lines were too slow and too much time was wasted waiting for downloads

The 3 most common positive comments

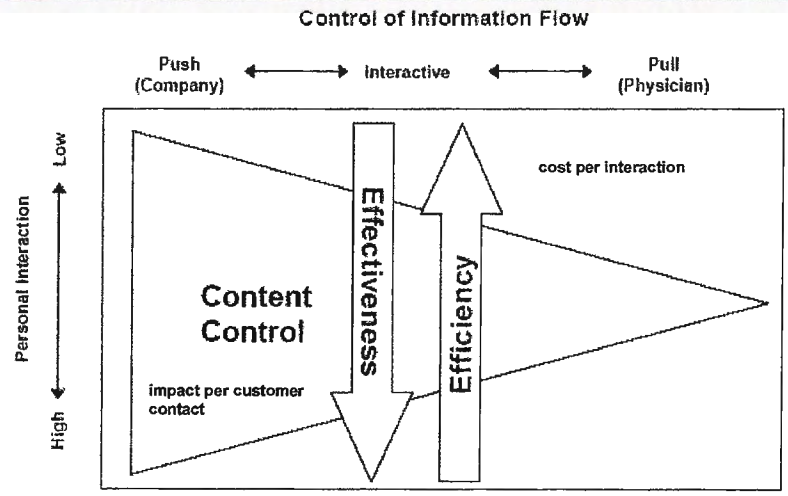
- Information was comprehensive and unbiased
- Information was meaningful and useful
- Modules were very interactive and exciting

Most physicians - 20/24 suggested that they would do another MSD e-Workshop like this, if they were invited to.

Recommendations

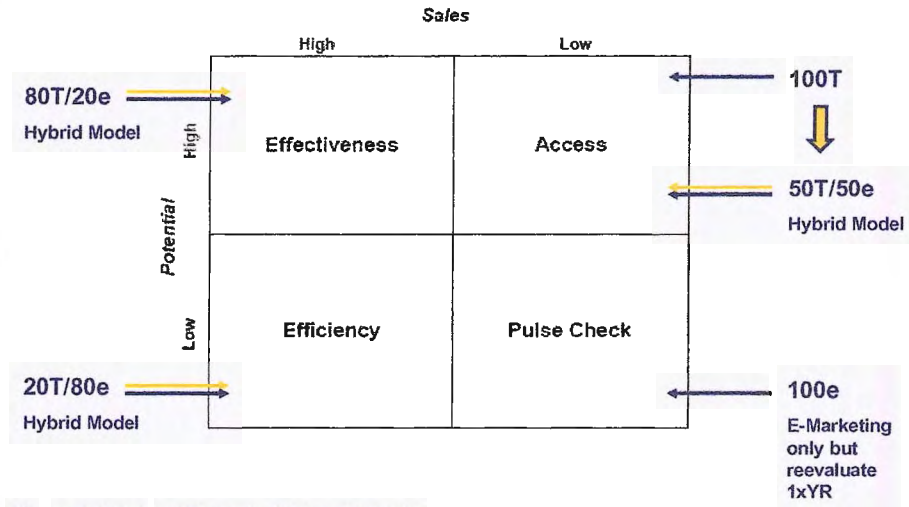
- MSD should track physician sales (scripts) – 9 months post exit survey, to determine if e-Detailing was able to drive desired behaviour.
- MSD should incorporate e-Profiling and e-Detailing into each business unit's marketing strategy – to compliment the sales force effort and optimise the sales and marketing ROI.
- MSD use a hybrid "push-pull" model that integrates e-Profiling and e-Detailing with the current sales force.
- The degrees of e-Profiling and e-Detailing application should depend on the products being marketed, where these products are in relation to their life-cycle and the customer segments being targeted.

The context in which e-Detailing evolved



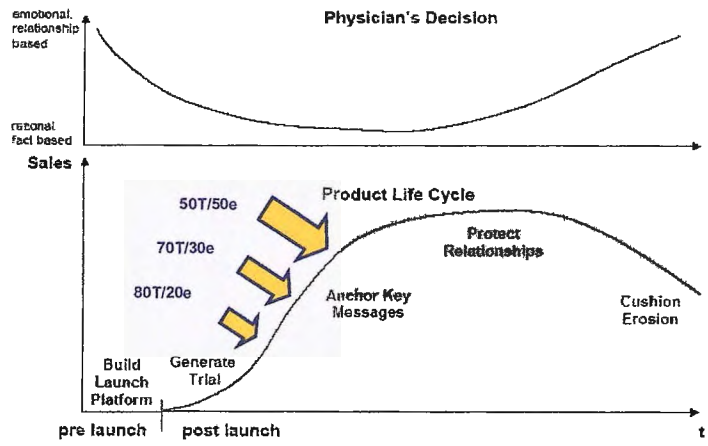
(Source: Bernewitz, ZS Associates, 2001)

Where to focus the e-Profiling and e-Detailing effort



(Source: Adapted from Bernewitz, ZS Associates, 2001)

Where to focus the e-Profiling and e-Detailing effort



(Source: Adapted from Bernewitz, ZS Associates, 2001)

Recommendations Continued

Which Products?

In the Cardiovascular business unit :

- EZETROL – in its early growth phase
- COZAAR – in its late growth / maturity phase

In the Respiratory business unit:

- SINGULAIR - in its growth phase 

Recommendations Continued

- Identify one product manager, per business unit, to take ownership of this arm of marketing.
- Determine which physician segments should be targeted – with consideration for business potential but also their e-responsiveness
- Determine how to attract your target physicians and increase web-traffic – with consideration for needs and preferences; and consideration for the local marketing code and statutory restrictions
- Develop strategies for integrating e-Detailing with the sales force – with consideration for field force activities and online and offline promotional message synergies (multi-channels opportunities)

Recommendations Continued

- Develop promotional messages and educational content that is both relevant, compelling, medico-legally approved, accredited and exciting.
- Design / purchase – with careful consideration of the opportunity costs relating to development versus outsourcing.
- Integrate value-added e-tools, useful resources and links into the e-Detailing workshop that have the potential to lock-in physicians.
- Employ a viral marketing techniques within the e-Detailing program produced that will encourage physicians to send information / links to other doctors they know.
- Centralise platforms in order to achieve economies of scale and therefore greater cost control.

Recommendations Continued

In the implementation phase:

- Reduce fears and resistance of the sales force early on – obtain their buy-in and aligned commitment to the integrated hybrid strategy
- Recruit physicians through exciting and intelligent invitations
- Engage and involve physicians as much as possible – remembering that 2-way communication is a key success factor.
- Provide online reporting and continuous support – helpdesks are preferred.

Recommendations for COZAAR

- The COZAAR e-Pilot will be available on the Softmed web-site for another 12 months. It therefore makes sense to make full use of the investment already paid for out of the 2005 marketing budget.
- It is strongly recommended that the length of these modules be reduced, so as to increase its attractiveness to potential users.
- Adapt current modules to reflect any changes to the COZAAR strategy (keep it current).
- Make it available to the entire SA physician community via URL invitation, the UNIVADIS marketing portal, via links on the company's corporate and product web-sites, as well as by rep invitation.