



Using Decision Support Tools



Smarter **NOT** **HARDER**

April 2008

Case studies in accurately recording and analysing clinical and demographic information



Acknowledgments:

This workbook has been produced by Noel Stewart for the North East Valley Division of General Practice as part of a workshop designed for general practitioners, practice nurses and practice managers.

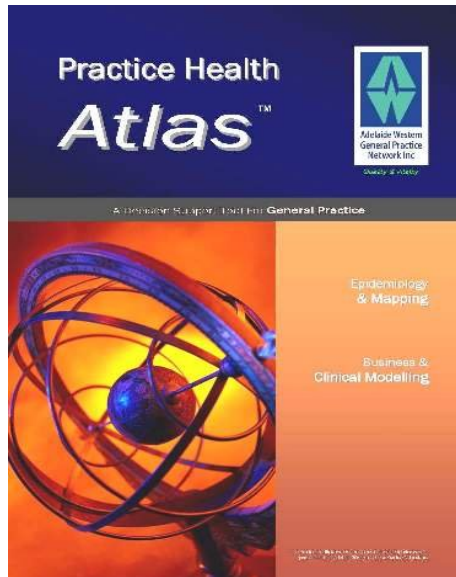
Further Information/Enquiries:

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Medical Director and accurate record keeping

Case Study 1 - History items and summaries

Year	Date	Condition	Side	Status	Summary	Confidential	Coded
1950		APPENDECTOMY		Inactive	Yes	No	Yes
1990	?	DIABETES		Inactive	Yes	No	Yes
1992	JUNE	ATRIAL FIBRILLATION		Active	Yes	No	Yes
1992	?	AMPUTATION - BELOW KNEE		Active	Yes	No	Yes
1995		HIP - TOTAL REPLACEMENT	Left	Inactive	Yes	No	Yes
1999	03/02/1999	SCHIZOPHRENIA - BORDERLINE		Active	Yes	Yes	Yes
1999	12/02/1999	MIGRAINE		Active	Yes	No	Yes
1999	25/02/1999	URINARY TRACT INFECTION		Active	Yes	No	Yes
1999	09/03/1999	BIG NIGHT WITH THE BOYS		Inactive	No	No	No
1999	10/08/1999	ANAEMIA - IRON DEFICIENCY		Active	Yes	No	Yes
2003	12/12/2003	MIGRAINE		Active	Yes	No	Yes
2003	12/12/2003	ASTHMA		Inactive	Yes	No	Yes
2005	28/07/2005	URTI - BACTERIAL		Active	No	No	Yes
2005	28/07/2005	HEART FAILURE		Active	Yes	No	Yes
2005	28/07/2005	CHRONIC PAIN		Active	Yes	No	Yes
2005	28/07/2005	OSTEOPOROSIS		Active	Yes	No	Yes
2005	14/10/2005	DIABETES		Active	No	No	Yes
2005	14/10/2005	GOUT		Active	Yes	No	Yes
2006	07/03/2006	ERECTILE DYSFUNCTION		Active	Yes	Yes	Yes
2006	13/06/2006	DIABETES MELLITUS - TYPE II		Active	No	No	Yes
2006	20/06/2006	DIABETES REVIEW		Active	No	No	Yes
2007	07/02/2007	HEALTH ASSESSMENT		Inactive	Yes	No	Yes



FULL PATIENT HISTORY

As at 21/08/2007.

Patient Details:	
Patient Name:	Mrs Maureen Andrews
Address:	3 Best St St. Kilda VIC 3107
Phone - Home:	8182 5634
Phone - Work:	
D.O.B.:	23/06/1923
Record Number:	345644
Medicare Number:	2294 72417 1 / 5
DVA Number:	
Allergies:	No known allergies.

Past Medical History:	
Date	Condition -- Comment
1950	APPENDECTOMY
? 1990	DIABETES
? 1992	AMPUTATION - BELOW KNEE rmh
June 1992	ATRIAL FIBRILLATION Not medically reversible therefore to remain on Warfarin Rx for life.
1995	HIP - TOTAL REPLACEMENT(Left)
12/02/1999	MIGRAINE
25/02/1999	URINARY TRACT INFECTION
10/08/1999	ANAEMIA - IRON DEFICIENCY
12/12/2003	ASTHMA
12/12/2003	MIGRAINE
28/07/2005	CHRONIC PAIN
28/07/2005	HEART FAILURE
28/07/2005	OSTEOPOROSIS
14/10/2005	GOUT
7/02/2007	HEALTH ASSESSMENT

Questions

1. Is this a good example of a patient's history?
2. Why the ? in the 1990 and 1992 history items? Is this a good thing?

Medical Director and accurate record keeping

Case Study 2 – History Items and summaries

All records							
Year	Date	Condition	Side	Status	Summary	Confidential	Coded
1996	10/02/96	ASTHMA		Inactive	Yes	No	Yes
2001		DIABETES		Active	Yes	No	Yes
2001	21/08/2001	URTI		Inactive	Yes	No	Yes
2002	21/08/2002	DIABETES		Active	Yes	No	Yes
2003	21/08/2003	ASTHMA		Active	Yes	No	Yes
2003	21/08/2003	URTI		Active	Yes	No	Yes
2004	21/08/2004	DIABETES		Active	Yes	No	Yes
2005	21/08/2005	HEART FAILURE		Inactive	No	No	Yes
2006	18/07/2006	PAP SMEAR		Inactive	Yes	No	Yes
2006	18/07/2006	DRESSING CHANGE		Inactive	No	No	Yes
2007	21/08/2005	ASTHMA		Active	Yes	No	Yes
2007	21/04/2006	HIV		Active	Yes	No	Yes
2007	21/03/2007	URTI		Active	Yes	No	Yes
2007	28/03/2007	URTI		Active	Yes	No	Yes
2007	21/04/2007	URTI		Active	Yes	No	Yes
2007	01/08/2007	MILD ASTHMA		Active	Yes	No	No
2007	21/08/2007	DIABETES		Active	Yes	No	Yes



FULL PATIENT HISTORY

As at 21/08/2007.

Patient Details:	
Patient Name:	Heather Andrews
Address:	2 Kennedy Rd Demotown NSW 1234
Phone - Home:	
Phone - Work:	
D.O.B.:	12/05/1963
Record Number:	
Medicare Number:	3500 2651 2 1
DVA Number:	
Allergies:	None recorded.

Past Medical History:	
Date	Condition -- Comment
10/02/1996	ASTHMA As a child - now resolved
2001	DIABETES
21/08/2001	URTI
21/08/2002	DIABETES
21/08/2003	ASTHMA
21/08/2003	URTI
21/08/2004	DIABETES
21/08/2005	ASTHMA
21/04/2006	HIV
18/07/2006	PAP SMEAR
21/03/2007	URTI
28/03/2007	URTI
21/04/2007	URTI
01/08/2007	MILD ASTHMA
21/08/2007	DIABETES

Questions

1. Why the repeated URTIs and DIABETES? Is this a good thing? How do we stop them appearing on the summary sheet?
2. What's wrong with MILD ASTHMA? How do we fix it?

Medical Director and accurate record keeping

Case Study 3 – Progress Notes

Previous visits: ALL

Date	Recorded by	Reason/Type of visit	Start	Duration	Medicare item	Review d...
05/09/1998	Dr. A. Practitioner		08:43:59	3m 46s		//
30/03/1999	Dr. A. Practitioner		11:58:10	2m 34s		//
04/02/2000	Dr. A. Practitioner		11:43:38	2m 43s		//
04/02/2000	Dr. A. Practitioner		17:32:58	1m 8s		//
05/02/2000	Dr. A. Practitioner		09:24:26	6m 58s		//
01/03/2004	Dr. A. Practitioner		13:55:43	6m 15s		//
03/06/2004	Dr. A. Practitioner		09:57:57	0m 22s		//
18/06/2004	Dr. A. Practitioner		11:41:58	0m 45s		//
18/06/2004	Dr. A. Practitioner		11:43:45	1m 12s		//
18/06/2004	Dr. A. Practitioner		11:47:44	28m 28s		//
08/12/2004	Dr. A. Practitioner		11:33:11	57m 23s		//
18/07/2006	Sharleen Cook	REGISTERED NURSE	14:07:22	7m 27s		//
18/07/2006	Sharleen Cook	PAP Smear	14:16:04	7m 44s		//
18/07/2006	Sharleen Cook	Dressing change	14:23:58	17m 16s		//
08/02/2007	Dr. A. Practitioner	Antenatal visit	15:56:57	7m 32s		//
15/03/2007	Dr. A. Practitioner		14:50:13	9m 33s		//
21/03/2007	Dr. A. Practitioner		16:18:51	44m 47s		//

Questions

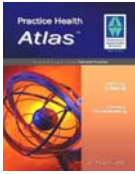
1. What is the problem here? Can it be retrospectively fixed?
2. What is the difference between how the nurse and the GP are recording visits?
3. What action is needed from now on to improve the record keeping?

Case Study 4 – Progress Notes

01/04/2004	Dr. A. Practitioner		10:27:34	12m 57s		//
06/05/2004	Dr. A. Practitioner		14:49:05	1m 9s		//
10/05/2004	Dr. A. Practitioner		14:23:02	0m 28s		//
28/10/2004	Dr. A. Practitioner		10:16:59	0m 19s		//
02/02/2005	Dr. A. Practitioner		09:11:51	1h 37m 22s		//
27/07/2005	Dr. A. Practitioner		11:47:53	3h 37m 25s		//
28/07/2005	Dr. A. Practitioner	Osteoporosis	13:56:15	1h 14m 40s		//
14/10/2005	Dr. A. Practitioner	Diabetes	14:11:50	10m 26s		//
14/10/2005	Dr. A. Practitioner	Gout	15:00:14	23m 58s		//
07/03/2006	Dr. A. Practitioner	Erectile Dysfunction	17:02:06	1h 21m 26s		//
13/06/2006	Dr. A. Practitioner	Diabetes	17:21:00	50m 37s		//
20/06/2006	Dr. A. Practitioner	Diabetes review	10:35:58	9m 2s		//
07/02/2007	Dr. A. Practitioner	Phone Consultation	10:17:59	38m 5s		//
08/02/2007	Dr. A. Practitioner	Health assessment	09:50:58	21m 47s		//
08/02/2007	Dr. A. Practitioner	Phone Consultation	10:12:57	1h 2m 8s		//

Questions

1. Is this a good example of progress notes?
2. What do you think happened after 28/7/2005? Why the change?



Practice Health Atlas – ACME Medical Centre

Case Study 1 – No. of patients attending

Total Number of Patient Records	12, 412	100%
Patients attending in last 30 months	9,748	79%
Patients attending in last 15 months	8,276	67%

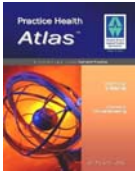
What actions would you recommend to the PMs, PNs and GPs?

- Inactivate all patients who have not attended for 30 months?
 - Establish a process of progressive data cleansing?
 - Identify reason for difference in 30 month & 15 month attendances?
 - analysis of visiting patterns
 - mainly male?
 - which age cohorts
 - All of the above
 - Other
-
-

What are the outcomes of the appropriate actions?

- Active patients are identified/inactive patients culled/archived
 - Recalls & reminders are more accurately targeted
 - Practice administrative costs are lowered, e.g. less wasted postage
 - Non-productive staff time is reduced
 - Other
-
-





Practice Health Atlas – ACME Medical Centre

Case Study 2 – No. of patients with diabetes

Number of identified diabetics	181	1.9%
Expected no. of diabetics	487	5.8%

Conclusion: the number of diabetics is either under-recorded and/or under diagnosed.

What actions would you recommend to the GPs and nurses?

- Opportunistically upgrade patient records as they attend
- Cross check the practice’s diabetic register
- Initiate a team meeting, including a discussion on the consistency of disease identification in data entry
- Other

What are the outcomes of the appropriate actions?

- Greater practice income achieved
- Greater use of Diabetes Annual Cycle of Care
- Pro-active diabetic program of care, e.g. GPMP/TCA
- Other

Case Study 3 – No. of patients on 5 or more medications

Number of patients on 5 or more medications	956
No. of HMRs	2

What actions would you recommend to GPs and nurses?

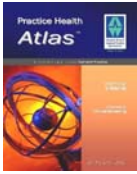
- Establish continuing program of HMR
- Implement a “catch-up” program for HMRs

What are the outcomes of the appropriate actions?

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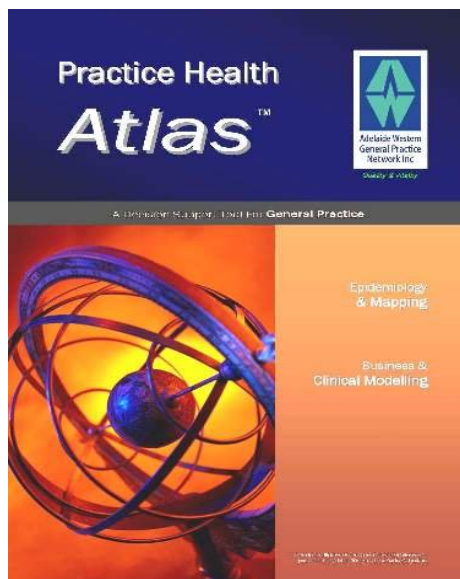
Practice Health Atlas – comparative data

Case Study 4 – Comparative demographic and clinical data

Practice	Num records	30 mth %	15 mth %	% diabetics	% asthma	% mental health	% cvd	% bone disease	% 5 or more meds	% 5+ meds w HMR
Practice A	12058	51.5%	45.4%	2.4%	9.9%	9.0%	1.4%	2.7%	7.9%	2.5%
Practice B	22148	53.5%	45.1%	3.8%	10.6%	7.9%	3.0%	3.9%	13.4%	1.6%
Practice C	8901	50.2%	39.7%	5.6%	11.4%	17.5%	3.9%	4.2%	17.7%	0.0%
Practice D	2504	94.9%	86.1%	18.0%	6.8%	32.2%	5.3%	25.1%	41.5%	40.0%
Practice E	26562	32.6%	25.0%	2.7%	6.1%	7.9%	2.8%	3.7%	14.3%	1.8%
Practice F	10839	50.3%	40.1%	2.4%	7.9%	7.4%	2.7%	2.7%	17.5%	2.8%
Practice G	32314	22.6%	18.6%	2.7%	9.1%	9.7%	1.7%	3.3%	15.8%	11.7%
Practice H	14666	33.6%	26.7%	7.2%	5.4%	12.3%	8.2%	7.2%	30.4%	10.4%
Practice I	6882	81.6%	67.6%	3.9%	11.3%	12.8%	4.7%	6.4%	17.4%	0.7%
Practice J	9165	78.2%	64.7%	5.0%	9.4%	9.1%	6.2%	6.4%	26.7%	0.8%
Practice K	11841	53.5%	39.6%	4.2%	10.1%	13.3%	9.0%	4.7%	18.1%	2.9%
Average		54.8%	45.3%	5.3%	8.9%	12.7%	4.4%	6.4%	20.1%	6.9%

Questions

1. Which practice has the cleanest “active” records? How do think this was achieved?
2. Practice D has 42.5% of its patients on 5 or more medications. What would be some of the contributing factors for this high percentage?
3. Choose a practice from A-K (but not D). Compare its figures with the other practices and the average. What is your practice doing well? What are the areas that could improve? What strategies would you adopt to improve your practice’s performance, both clinically and financially?



PEN Clinical Audit Tool

CASE STUDY 1 – First extract from a practice

Collection Date: 20/3/2008

Total population = all patients

Active population = seen 3 times in last 2 years

	xxxx MC
1. Allergy Recorded	
<u>Total population</u>	51,675
Allergy recorded	5%
No Known Allergy recorded	21.2%
Nothing recorded	73.9%
<u>Active population</u>	7,104
Allergy recorded	18.1%
No Known Allergy recorded	74.4%
Nothing recorded	7.4%
2. Gender not recorded	
<u>Total population</u>	1990
<u>Active population</u>	97
3. Smoking – nothing recorded	
<u>Total population</u>	85.7%
<u>Active population</u> (Active (3x > 2 years))	46.3%
<u>Active population over 16</u> (Active (3x > 2 years))	36.8%
4. Recording of ATSI patients	
<u>Total population</u>	0
<u>Active population</u> (Active (3x > 2 years))	0
5. Diabetes Prevalence	
<u>Total population</u>	0.4%
<u>Active population</u> (Active (3x > 2 years))	2.0%
% Diabetes in postcode area	5.6%

Questions:

Total population compared to Active population

1. What is the significance of this disparity between the 2 figures?
2. Why this disparity?
3. What strategies do we use to bring down the total population from 51,000?

Gender not recorded

1. How do “cleanse” this data?

Recording of ATSI patients

1. This is obviously under-recorded. What strategies do you use to more accurately record your ATSI population?

PEN Clinical Audit Tool

CASE STUDY 2 – First two extracts from a practice

Medical Centre – Second Report using Clinical Audit – March 2008

Collection Date: 3/3/2008

Total population = all patients

Active population = seen 3 times in last 2 years

	October 2007	March 3 2008
1. Allergy Recorded		
<u>Total population</u>	7127	6993
Allergy recorded	20.6%	21.9%
No Known Allergy recorded	56.9%	63.3%
Nothing recorded	22.6%	14.8%
Active population		
Allergy recorded	24.2%	25.20%
No Known Allergy recorded	60.3%	66.1%
Nothing recorded	15.5%	8.7%
2. Gender not recorded		
<u>Total population</u>	84	0
<u>Active population</u>	26	0
3. Smoking – nothing recorded		
<u>Total population</u>	42.8%	33.3%
<u>Active population</u> (Active (3x > 2 years))	37%	27.3%
<u>Active population over 16</u> (Active (3x > 2 years))	33.8%	17.4%
4. Recording of ATSI patients		
<u>Total population</u>	3	3
<u>Active population</u> (Active (3x > 2 years))	2	3
5. Diabetes Prevalence		
<u>Total population</u>	4.5%	4.8%
<u>Active population</u> (Active (3x > 2 years))	5.8%	6.0%
% Diabetes in postcode area	5.6%	5.6%

Questions:

1. In what areas do you see the quality improvements in the data?

Allergies:

Gender not recorded:

Smoking:

ATSI:

Diabetes prevalence:

2. What areas need more work?

PEN Clinical Audit Tool - CASE STUDY 3 – Composite Report using Clinical Audit - February 2008

Total population = all patients
 Active population = seen 3 times in last 2 years

1. Allergy Recorded	Practice 1	Practice 2	Practice 3	Practice 4	Practice 5	Practice 6	Practice 7	Practice 8	Practice 9
Total population	8347	2534	11159	7127	7902	6829	9446	13761	22739
Allergy recorded	8.0%	22.2%	8.9%	20.6%	5.8%	18.6%	14%	18.2%	12.3%
No Known Allergy recorded	32.1%	71.3%	26.0%	56.9%	24.6%	63%	58.1%	42%	49.0%
Nothing recorded	59.9%	6.5%	65.1%	22.6%	69.5%	8.4%	27.2%	39.7%	38.8%
Active population	2815	1881	4106	5439	1952	4090	3893	8083	9213
Allergy recorded	17.6%	27.2%	17.6%	24.2%	17.9%	24.7%	25.9%	25.4%	20.9%
No Known Allergy recorded	64.2%	72.2%	51.9%	60.3%	69.9%	70.8%	74.3%	57.3%	75.8%
Nothing recorded	18.3%	0.6%	30.4%	15.5%	12.2%	4.4%	3.8%	17.4%	3.2%
2. Gender not recorded									
Total population	37	1	78	84	1011	164	583	306	3175
Active population	0	1	0	26	6	4	66	5	37
3. Smoking – nothing recorded									
Total population	71%	12.5%	92.4%	42.8%	78.7%	70%	38.7%	82%	58.9%
Active population (Active (3x > 2 years))	37.6%	4.0%	84.4%	37%	30.4%	22.9%	17.1%	81%	26.5%
Active population over 16 (Active (3x > 2 years))	26.0%	1.1%	82.4%	33.8%	19.0%	9.1%	4.6%	18.2%	10.4%
4. Recording of ATSI patients									
Total population	?	0	0	3	3	3	2	7	2
Active population (Active (3x > 2 years))	5	0	0	2	0	3	2	6	2
5. Diabetes Prevalence									
Total population	3.2%	17.5%	1.1%	4.5%	2.24%	2.86%	1.8%	17.58%	2.4%
Active population (Active (3x > 2 years))	6.8%	22.8%	3.0%	5.8%	7.22%	2.2%	3.8%	29.32	5.3%
% Diabetes in postcode area	5.6%	5.6%	5.7%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%

PEN Clinical Audit Tool

Case Study 3 - Composite report of 9 practices

Questions:

Allergies

1. Which practice has a good set of figures? Based on what criteria?
2. How would you get Practices 1, 3, 5 and 9 to improve the recording of “allergy status”?

Gender

1. What do we do to ensure all patients have their gender recorded?

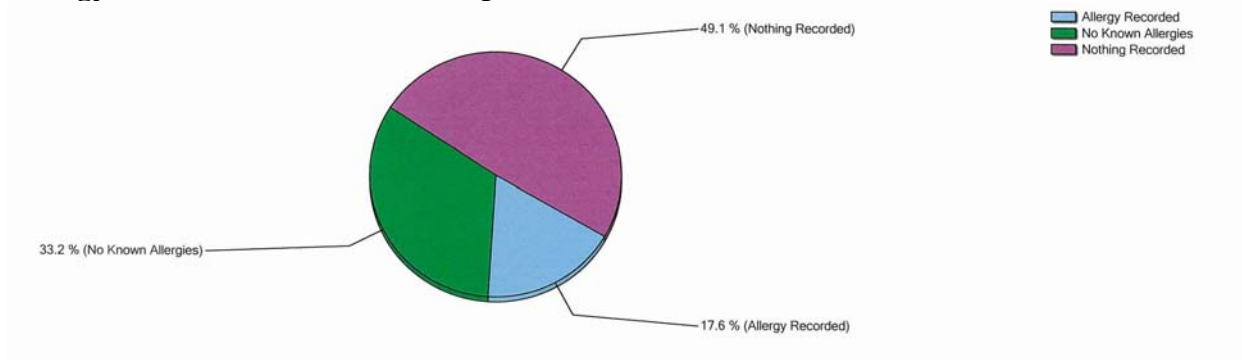
Smoking

1. Practice 3 has no recording of smoking status of 82.4% of active patients over 16. Why do you think this is so? How would you redress this situation?

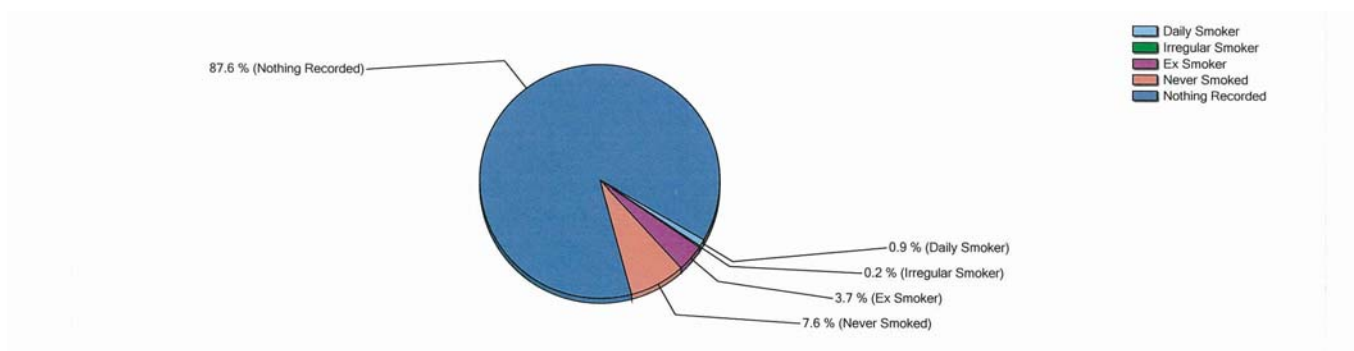
ATSI patients and Diabetes Prevalence

1. All practices have under recorded the number of ATSI patients and diabetes prevalence. How would you redress this situation?

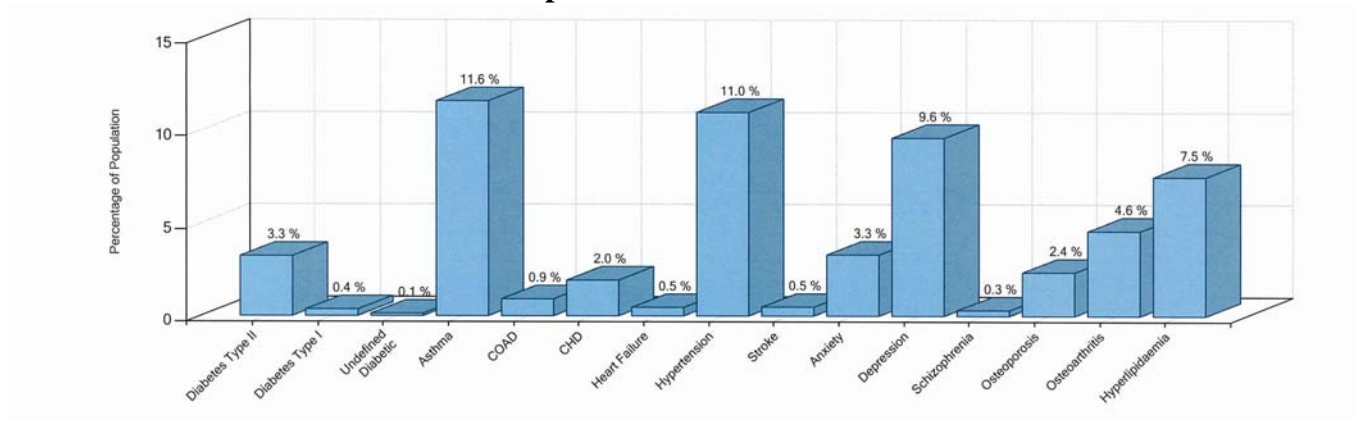
Allergy Status of Active Patient Population – Practice xx



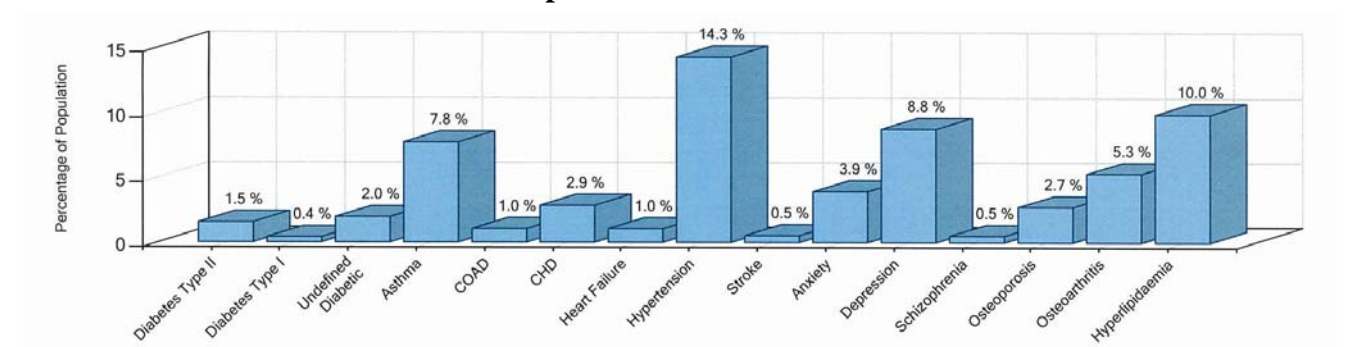
Smoking Status of Active Patient Population over 16 years old – Practice yy



Disease Prevalence of Active Patient Population – Practice zz



Disease Prevalence of Active Patient Population – Practice aa





My Work Plan

At the completion of this workshop your job is to document what you intend to do back at your work location and how you are going to follow it up. The tasks that you document here could range from the very simple to the complexities of thorough data cleansing or setting up management systems.

What I plan to do tomorrow/next week

Priority Order	Task	How am I going to do it
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		

What I plan to in the next few weeks/months

Priority Order	Task	How am I going to do it
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		



Some suggested activities

- Identify patients not seen in last 3 years and make them inactive
- Opportunistically correct inaccurate diagnoses and histories
- Insist that Allergy/smoking status is recorded (family/social history & alcohol as well)
- Review recall systems
- Buy Noel a bottle of wine, preferably a New Zealand Sauvignon Blanc
- Understand 100% how to record accurate histories/summaries and “reason for contact” in progress notes
- Educate clinicians on how to record accurate histories
- Sign up for Collaboratives
- Sign up for Practice Health Atlas
- Buy Noel a bottle of wine, preferably a New Zealand Chardonnay from the Marlborough region
- Start a process so that all patients have their smoking and/or allergy status recorded
- Start a process so that all clinical staff know how to correctly fill in history items and reason for contact
- check all patients have their gender correctly recorded
- Target patients that would benefit from a HMR.
- Target patients that would benefit from an item 717.
- Buy Noel a bottle of wine, preferably a New Zealand Cab Sav
- Organise a practice visit from Noel to “clean up your act”
- Download “data cleansing” checklist on NEV website
- Obtain 28 page book “Clean up your act” available from NEVDGP
- Arrange “data cleansing” workshops with Noel