

# Empowering patients through automated education, information and advice before consultations

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Discipline of General Practice

SCHOOL OF  
MEDICINE



THE UNIVERSITY  
*of* ADELAIDE

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# What is the problem that we are trying to solve?

People who attend general practices receive only some of the recommended care

People are often unaware of this

GP is often also unaware of some of the recommended care - but even when aware, does not mention it

# Causes of the problem

- Variations between care indicated for different people depending on age, gender and recorded personal and family history
- Complexity of care indicated for each person
- Care of obvious and immediate problems and needs is preferentially valued and rewarded

# Causes of the problem

## **Patient factors**

- Lack of access to records made by health professionals
- Variable interest, motivation and health literacy

## **GP factors**

- Clinical record software still largely passive and does not provide enough active guidance

# Patients' views of GPs' performance in prevention

“Participants (...) rated their general practitioners as poor at delivering prevention. (...) Opportunistic preventive care occurred infrequently, as GPs were not generally proactive in their approach. (...) Barriers to participants seeking preventive care through their GPs included lack of knowledge about what preventive care was relevant to them. (...) They wanted to be better informed so that they could take action. Receiving reminders or letters of invitation from their GP prompted action, particularly if these targeted their age or life-stage.”

General practice and preventive health care: a view through the eyes of community members. Danielle Mazza, Lyndel K Shand, Narelle Warren, Helen Keleher, Colette J Browning and Emma J Bruce. Med J Aust 2011; 195 (4): 180-183.

# Patients' views of GPs' performance in prevention

“Participants (...) rated their general practitioners as poor at delivering prevention. (...) **Opportunistic preventive care occurred infrequently, as GPs were not generally proactive in their approach.** (...) **Barriers to participants seeking preventive care through their GPs included lack of knowledge about what preventive care was relevant to them. (..) They wanted to be better informed so that they could take action. Receiving reminders or letters of invitation from their GP prompted action, particularly if these targeted their age or life-stage.**”

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# Our strategy to address the problem

Automatically generate targeted personalised education, information and advice based on the patient's current status. Present this to the patient at a moment when the patient can act immediately with a minimum of additional time, effort or cost



# How can we do this?

By using software that when the patient arrives for a consultation compares algorithms about recommended preventive and other care with data in the patient's electronic clinical record to generate relevant education, information and advice, that is given to the patient to read while waiting

# Origins of the waiting room software

The waiting room software is built on the Doctors' Control Panel software:

[www.doctorscontrolpanel.com.au](http://www.doctorscontrolpanel.com.au)



The screenshot shows the top navigation bar of the Doctors Control Panel website. The navigation menu includes: Home, What is DCP?, Download, dcpresults, Help, Whats New, Media, and a Blog icon. A banner below the navigation says "The DCP has a new home!". Below the banner is a white box with the text "DCP. DCP is a third party add-on for Australian medical software (MD3, BP or Medinet) for better preventive care management." At the bottom of this box are two buttons: "Learn more »" and "Watch The Video»".



The screenshot shows a laptop screen displaying the "Colour Coded Guidance" software interface. The interface is a grid of various medical tasks and reminders, color-coded by urgency or status. The tasks include: Clinical, Smoking, Fam. hx, Alcohol, Recall, Recall Action, Action, Action, Items, ATSL, ANC, AsthmaP, DiabP, GPMP Rev-1, MtICP, Nurse 10997-0, TCA Rev-1, Med'n, Stain, Aspirin, ARB/ACEI, BB, Imm's ADI(S), Influenza(I), Pneumovax(I), Measure BP, Height, Weight, Waist, CVRisk, UA Prot, Diab Assess, Foot Ex, Diet Ed, Diab Ed, Ophthal, PEFR, FEV1, EVC, Asthma Plan, PAA, MedRev, Acuity, Targets, CVR High, Smoker, HBA1C, Chol, LDL, TRIG, SysBP, DiasBP, BMI, Tests, Elec U, Glu, Lip, FOB U, FBE U, ECG, CXR, MicAlb, HBA1C, Notify, Outside, and icons for various medical services.

Unlimited  
pathology and radiology  
sms result delivery  
->  
Reduce Phone Calls  
WITH DCP SUB.

**Preventive Care Tasks**  
"If it is not measured, it is not done."  
Preventive care begins with information gathering and measurement.  
DCP uses current guidelines to assess status of preventive care and provide guidance on what information needs to be gathered to meet recommendations from the RACGP Red Book, Diabetes management guidelines etc. Complex rules, flow charts and manuals of

**Enhanced Primary Care - Truly**  
"Complexity is the root of the problem and paperwork layered on top of complexity is ludicrous."  
DCP offers simplification of preventive care assessment as well as reporting (paperwork). Complete your EPC paperwork after updating the patients preventive care items (i.e. 'go green' on the DCP panel).  
Use the patient centric documents in DCP to

**Distribute results (eliminate phone calls)**  
"Are my results ready yet?"  
"Can I speak to Doc about my results?"  
How much time can you save if you do not have to deal with telephone calls for results? Send results to patients using the DCP which uploads checked annotated results to dcpresults.com web site. The web site notifies patients via SMS when results are uploaded. The SMS includes a PIN and patients log on to

# GP's consulting room screen (Best Practice)

Mr. Alan Abbott

File Open Request Clinical View Devices PCEHR Help

Family members: Mr. Alan Abbott Jump Open

Name: Alan Abbott D.O.B.: 30/06/1945 Age: 70 yrs Sex: Male 1h 0m 20s Finalise visit

Address: 12 John St Woodlane 4035 Phone: 07 50505050 Mobile: 0427556232 Work: 07 50509999

Medicare No: 4133180467 - 1 12/13 Record No.: 101 Pension No.: 123456789 Comment: On warfarin

Occupation: Tobacco: Alcohol: Elite sports: Ethnicity: Aboriginal/Torres Strait Islander

Blood Group:

Allergies / Adverse Drug Reactions: Reactions

| Item                | Reaction     | Severity |
|---------------------|--------------|----------|
| House dust mite     | Bronchospasm | Severe   |
| Trifle              | Nausea       | Severe   |
| Aluminium Hydroxide |              |          |

Actions/Reminders: Preventive Health Actions Reminders

| Type              | Due        | Reason   |
|-------------------|------------|--|
| Action            | 28/02/2012 | Check TFTs                                       |
| Action            | 23/05/2012 | Follow-up referral                               |
| Preventive health | 12/11/2015 | Influenza vaccination should be considered!      |
| Preventive health | 12/11/2015 | A smoking history should be recorded!            |
| Preventive health | 12/11/2015 | A Dementia Risk Assessment should be considered! |
| Preventive health | 12/11/2015 | A Health Assessment should be considered!        |

Expand Collapse

Mr. Alan Abbott

Today's notes

- Past visits
- Current Rx
- Past history
- Immunisations
- Investigation reports
- Correspondence In
- Correspondence Out
- Past prescriptions
- Observations
- Family/Social history
- Clinical images
- Enhanced Primary Care

Add Edit Delete Print

Script date: 12/11/2015 Tick the boxes of the items that you want to print  
Items in red have been calculated to have been fully used

| Drug name   | Strength    | Dose                       | Quantity   | Rpts. | Script type | Long term | Last script | Approval No. | Subst. | Reg. 24 | First script | Reason for prescription | Comment | NPDR Consent   |
|---|-------------|----------------------------|------------|-------|-------------|-----------|-------------|--------------|--------|---------|--------------|-------------------------|---------|----------------|
| <input type="checkbox"/> Fixotide 250 CFC-Free 250mcg In  | 250mcg      | 2 puffs Twice a day        | 1x120 dose | 5     | PBS         | Yes       | 05/12/2011  |              | No     | No      | 02/03/2004   | Asthma                  |         | Not applicable |
| <input type="checkbox"/> Losec 20mg Tablet                | 20mg        | 1 Daily                    | 30         | 1     | PBS         | Yes       | 23/02/2006  |              | Yes    | No      | 23/02/2006   |                         |         | Not applicable |
| <input type="checkbox"/> Ventolin CFC-Free 100mcg/dose In | 100mcg/dose | 1-2 puffs Every 4 hours pm | 2x200 dose | 5     | PBS/OTC     | Yes       | 05/12/2011  |              | Yes    | No      | 02/03/2004   | Asthma                  |         | Not applicable |

Currently logged in: Dr. Frederick Findacure Thursday 12/11/2015 12:24:07 PM 12:24 PM 12/11/2015

# Doctors' Control Panel on-screen display

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Waiting Room Empty

Mr. Alan Abbott DCP Subscription

Clinical Soc Hx Recalls(1) Actions(2) Recent Dx(2)

Active Hx(5) Coding(2)

MBS Items feature requires Subscription

Open About Form

Med'n Statin Prune?(Reg 3)

Imm's ADT (0) Influenza (0) Pneumovax (1)

Measure AsthmaPlan BloodPress BMI DiabAssess

DiabEduc Dietitian FEV1 FootExam FVC Height

MedicReview MMSE Ophthal PEFR Podiatry

VisualAcuity Waist Weight

Targets CVR High

Tests ACR BMD eGFR FBE FOBT Glucose HBA1C

Lipids Abn Atoms(1) Notify\*(1) Outstd'g(1)

AMH BMJ

Currently logged in: Dr. Frederick Findacure

11:36 AM 12/11/2015

Waiting Room Empty



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Active Hx(5) Coding(2)

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Open About Form

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Measure AsthmaPlan BloodPress BMI DiabAssess

DiabEduc Dietitian FEV1 FootExam FVC Height

MedicReview MMSE Ophthal PEFR Podiatry

VisualAcuity Waist Weight

Targets CVR High

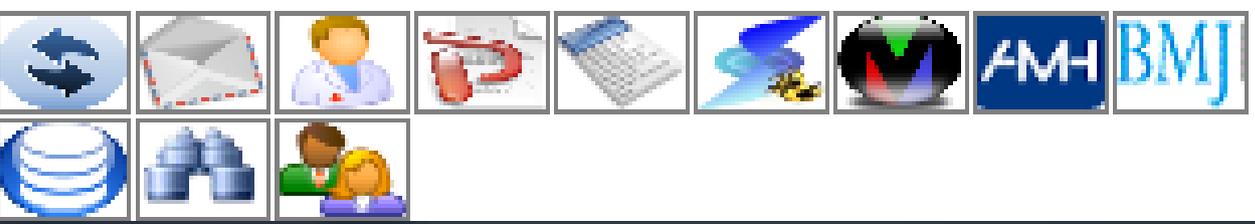
Tests ACR BMD eGFR FBE FOBT Glucose HBA1C

Lipids Abn Atoms(1) Notify\*\*(1) Outstd'g(1)

Green = to be done again in the future

Yellow = due to be done now

Red = none on record



# Our strategy

A man walks in to a surgery for his appointment with his GP...



# Wellness Medical Centre

82 Healthy Street, Goodsville 5095

Phone 3895 2224

## Summary of preventive activities for **Mr. Test Patient**

Dear Test,

9/02/2015

The following preventive activities are important to help you stay well. The advice below is based on the information that we have in your record. If any of it is incorrect, please tell me. I will be pleased to explain in our consultation what the information and advice below means for you.

Dr. Mary Goodheart

---

When we meet in a few minutes, please ask me about these activities that are **due to performed for you now:**

**Bowel cancer** is a common cancer in people over the age of 50. Your last bowel cancer screening test was performed on 17/12/2012. We should arrange another bowel cancer test for you **today or at your next visit.**

**High blood pressure** increases the risk of stroke, heart attack, kidney failure and poor circulation in the legs. Your last blood pressure reading was 140/90 on 14/04/2009. We should measure your blood pressure **today or at your next visit.**

**Pneumonia** is a serious illness, especially for older people. We can protect you against pneumonia by immunising you. We have no record of a pneumonia immunisation for you. We should immunise you against pneumonia **today or at your next visit.**

# Wellness Medical Centre

82 Healthy Street, Goodsville 5095

Phone 3895 2224

Ms. Test Patient

9/2/2015

## **Important information to help you to stay well Chlamydia test**

Dear Test,

Chlamydia is the most common sexually-transmitted infection. It can cause pelvic inflammation in women, and infertility in both men and women. It often has no symptoms. We can diagnose Chlamydia easily with a urine test or cervical swab. All sexually active people aged 15 to 29 years should be tested for Chlamydia every year, or if they have new sexual partners. We can cure Chlamydia with antibiotics.

We have no Chlamydia test on record for you.

When we meet in a few minutes, please ask me about having a test for Chlamydia.

Dr. Kylie Goodheart

# Pilot trials were successful

**Patient acceptance and perceived utility of pre-consultation prevention summaries and reminders in general practice: pilot study.** Frank OR, Stocks NP, Aylward P. BMC Fam Pract. 2011 May 26;12:40. doi: 10.1186/1471-2296-12-40. [2008 RACGP Family Medical Care, Education and Research Foundation Grant.](#)

**Development of pre-consultation prevention summary and reminder sheets for patients: preliminary study of acceptability and sustainability.** Frank O, Aylward P, Stocks N. Aust Fam Physician. 2014 May;43(5):310-4. [2011 RACGP Foundation Grant for a Pilot Study.](#)

**Increasing prevention, detection and treatment of osteoporosis through automated opportunistic reminders to patients, general practitioners and practice nurses.** Frank OR, Stocks NP, Aylward P. Manuscript in preparation. [2011 RACGP/Osteoporosis Australia Bone Health Research Grant.](#)

“Yes it gave me information that I didn’t know – for example the injection I can have to stop me getting pneumonia - because I have bad chest infections in winter - and I didn’t know I should still be having smear tests.” M23, female, 59 years.

“It helps you get more out of the consultation. It’s a useful way to spend the time while you’re waiting. If I have to wait 15 minutes to see the doctor I would much rather read this than the “Woman’s Day” or the news. It reinforces the consultation.” H32, male, 37 years.

“It helped because it raised awareness about things and prompted me to ask about things I hadn’t thought about before.” H5, female, 33 years.

# New trials recruiting soon

Changes in performance of preventive care from automated pre-consultation patient prevention information sheets: randomised controlled trial

## **Victoria**

Associate Professor Meredith Temple-Smith  
Department of General Practice  
University of Melbourne

## **New South Wales**

Professor Nick Zwar  
School of Public Health and Community Medicine  
University of New South Wales

## Pricing

The beta versions of the DCP software are currently available free of charge

## Contact

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